

Academy of Psychosomatic Medicine: Proceedings of the 45th Annual Meeting November 19–22, 1998, Lake Buena Vista (Orlando), FL

Scientific Poster Session

1. Screening for Postpartum Depression in Olmsted County, Minnesota: A Population-Based Study Using the Edinburgh Postnatal Depression Scale

A.M. Georgiopoulos, BA; T.L. Bryan, BS; M.S. Houston, MD; B.P. Yawn, MD; T.A. Rummans, MD, FAPM; M.P. Evans, MD; K.K. McKeon, MD; T.M. Therneau, PhD

Background: Although women commonly experience depressive symptoms following childbirth, postpartum depression appears to be underdiagnosed in the community setting. **Objective:** To determine the community prevalence in Olmsted County, Minnesota, of elevated scores on the Edinburgh Postnatal Depression Scale (EPDS), a self-report screening tool for postpartum depression. **Study Design:** The EPDS was administered at the 6-week postpartum visit to all Olmsted County women giving birth in Olmsted County between July 28, 1997 and March 28, 1998. Study sites included all ambulatory clinics providing pregnancy care in the county, and women missing their postpartum visit were contacted by mail. An EPDS threshold of ≥ 12 was selected for clinical use; data for scores ≥ 10 were also examined. **Results:** Of the 909 Olmsted County women studied, 11.4% ($n = 104$; CI_{95} 9.4%–13.5%) had EPDS scores ≥ 12 . The proportion of women with a positive screen increased to 19.8% ($n = 180$; CI_{95} 17.2%–22.4%) when EPDS scores ≥ 10 were included, as has been recommended for screening in primary-care settings. Forty-eight, or 5.3% (CI_{95} 3.8%–6.7%) of the 909 subjects indicated experiencing suicidal ideation during the previous week. **Conclusion:** This point prevalence of elevated EPDS scores, indicating likely postpartum depression and the need for further assessment, is 3 to 5 times higher than the 3.7% 1-year incidence rate of recognized postpartum depression in this community before initiation of screening. These results support the feasibility of universal EPDS screening for postpartum depression to improve identification of women suffering from this serious, common, and highly treatable disorder.

2. A Review of Literature on Breaking Bad News in Oncology

J. Almanza-Muñoz, MD; J.C. Holland, MD, FAPM

This study was undertaken to examine the literature on breaking bad news in cancer patients, with the goal of using it as evidence for clinical guidelines. Computerized searches were based on Pub-Medline, the Institute for Scientific Information, and the Cochrane Collaboration Reviews, using bad news and cancer patients as descriptors. Additional studies were identified by reviewing journals and by scanning the references listed on the articles retrieved. All were evaluated and classified according to the scientific criteria for quality of research, and the principles of evidence-based medicine. A total of 166 articles—from 1975 to the start of 1998—were published about breaking bad news. There was an important increase in the number of such publications in 1993, but the highest number was published in 1997 (36.1%). Fifty papers (30.1%) focused on medical practice; 69 (41.5%) looked at research; 17 (10.2%) dealt with training; and 30 (18%) were miscellaneous in subject. According to the evidence categories noted above, 14.5% of the research can be classified as Category I, 34.8% as Category II, and 50.7% as Category III. Most of the reviewed papers were derived from oncology practice. The general consensus calls for systematic preparation of physicians to improve their communication skills and techniques in relaying bad news, as well as to recognize the need for an appropriate site and adequate time for this purpose. Also noted in the literature is the importance of research and the need for a theoretical framework. The implications of the literature review are discussed and clinical guidelines are proposed.

3. Psychiatric Symptoms and Emotional Distress in Latex Allergy Patients

S.K. Ball, MD, FAPM; E. Borel, DDS; D. Adkins, RRT; S. Delaney, MBA

Latex allergy has become a major cause of morbidity and disability in people exposed to rubber latex products in the hospital environment. Healthcare workers com-

prise a large proportion of this population as a result of the intensive use of latex gloves for protection against the transmission of human immunodeficiency virus. The allergy can manifest as a mild allergic skin rash or can become so severe that the subject can have anaphylactic reactions on exposure to many latex-containing products in the non-hospital environment. There is a growing body of literature on the cross-reactivity of many foods with natural rubber latex. Patients with severe forms of the allergy are severely restricted in their ability to access medical care due to the use of latex products in the medical environment. There is no literature to date on the psychosocial consequences of this potentially devastating condition. To address this issue, a psychosocial questionnaire was devised and distributed to subscribers of a latex allergy newsletter. The questionnaire focused on a psychiatric symptom checklist, exposure to mental health treatment, demographic information, degree of disability, impact on employment, and the impact of the illness on social and emotional functioning. Of a total of 122 collected questionnaires, 93% of respondents were female, and 80% were healthcare workers. Their average age was 40.9 years. Unable to work because of the severity of their symptoms were 37.4%; unable to find a safe latex-free environment in which to obtain medical treatment were 54%. Eighty percent of respondents no longer felt that the world was a safe place to live. Thirty-three percent reported between 6 and 15 symptoms of depression; of these, 69% were on no psychiatric medications, 62% had no mental health treatment, and 69% had not been assigned a psychiatric diagnosis. Eighteen percent of the total respondents had panic attacks; 21.5% feared going out; and 59% avoided a significant number of situations because of fear of having a physical reaction. Several other psychosocial parameters were explored and will be presented in detail. This preliminary data reflect the tremendous amount of psychological and physical distress experienced by this patient population. Only a small percentage come to the attention of psychiatrists. C-L psychiatrists are in a unique position to identify patients who are at risk for psychiatric morbidity from their latex allergy and to educate their medical colleagues as to these risks as they work alongside them in the hospital.

4. Explant Histology Does Not Indicate Alcohol Dependence in Liver Transplant Recipients: A Controlled Study

T.P. Beresford, MD, FAPM; G.T. Everson, MD; J. Stephens, MD; M. Tannenbaum, MD; A. Amponsah, MD

Purpose: To use a controlled study to determine whether individual histologic features in liver explants

correlate with the pretransplant diagnosis of alcohol dependence (AD). **Methods:** Two well-matched groups of patients transplanted between 1988 and 1995 were studied. Forty-two satisfied DSM-IV criteria for AD; 38 age- and gender-matched patients without AD or alcoholic liver disease served as controls. Two pathologists, blinded to the clinical diagnosis, reviewed all histologic sections (H&E, trichrome). Explant tissues were read according to predefined histologic criteria: micronodular cirrhosis (MNC), steatosis (St), Mallory's hyaline (MH), polymorphonuclear inflammatory infiltrate with St and MH (alcoholic [ETOH] hepatitis), and chronic hepatitis (CH). Concordance in pathologists' interpretation was 94%.

Results	% AD	% non-AD	P (χ^2)
MNC	60	45	NS
St	36	16	0.04
MH	21	3	0.01
MNC + St + MH	14	0	0.02
CH	45	50	NS

Conclusion: Although observed only in a minority of cases, Mallory's hyaline (MH) is the only histologic feature in liver explants that correlates with pretransplant alcohol dependence. Nine of 10 cases with MH were AD patients (90% predictive value). Even though steatosis is more common in AD patients, it is frequently found in non-AD patients and lacks predictive value for AD. MNC in explants lacks any specificity for pretransplant AD.

5. Explant Histology Suggesting Ongoing Alcohol-Induced Injury Fails to Predict Relapse to Drinking After Liver Transplantation

T.P. Beresford, MD, FAPM; G.T. Everson, MD; J. Stephens, MD; M. Tannenbaum, MD; A. Amponsah, MD

Purpose: To determine whether histologic evidence of ongoing alcohol-mediated hepatic injury in explants predicts relapse to alcohol posttransplant. **Subjects:** Sixty-eight patients meeting criteria for alcohol dependence (DSM-IV) were transplanted between 1988 and 1995. Six died early and were not further analyzed, and eight died late (ETOH-related 4, carcinoma 1, atherosclerosis 3). Six of the 62 patients returned to pathologic drinking (PDr), and five others returned to minimal or moderate drinking. Histologic sections (H&E, trichrome) of explanted livers were reviewed independently by two pathologists blinded to the clinical diagnosis; concordance was 94%. All biopsies were read according to predefined histologic criteria:

micronodular cirrhosis (MNC), steatosis (St), Mallory's hyaline (MH), and chronic hepatitis (CH).

	Prediction of Relapse by Histologic Features					
		MNC	St	MH	MNC + St + MH	CH
	<i>n</i>	%	%	%	%	%
PDr+	6	80	20	20	20	20
PDr-	56	55	39	20	14	39
<i>P</i> ^a		NS	NS	NS	NS	NS
Any						
Dr+	11	80	40	10	10	20
Dr-	51	53	39	22	16	41
<i>P</i> ^a		NS	NS	NS	NS	NS

Conclusion: Histologic features suggestive of ongoing alcohol-induced liver injury in the explanted liver (St, MH, MNC + St + MH) do not predict likelihood of relapse to either pathologic or any drinking posttransplant.

6. Neuropsychological Status as a Function of CD4 Count, Viral Load, and Other Measures of HIV Progression

R. Cohen, PhD; R. J. Boland, MD; P. Schuman, MD; J. Moore, PhD; E. Schoenbaum, MD; D. Moser, PhD; D. Osoweicki; K. Morrow, PhD

Objective: This study investigates whether neuropsychological (N-Ψ) impairments in HIV + women vary longitudinally with CD4 count and viral load changes. It also investigates whether aggressive antiviral (HAART) therapy results in improved N-Ψ status. **Methods:** Four hundred thirty-five women were examined. HIV + women were entered into this study when their CD4 decreased below 100, and assessed every 6 months. These women were part of a multisite longitudinal study on the course of HIV in women (the CDC-funded HIV Epidemiological Research Study [HERS]). They received a brief N-Ψ battery, psychosocial assessment, an assessment of substance abuse, and various laboratory and medical indices. Using linear regression, MANOVA, and time-series analyses, we examined how N-Ψ performance varied in relationship to the illness-related factors described above. **Results:** A strong relationship between N-Ψ dysfunction and CD4 level was found ($r=0.77$), with color sequencing errors and verbal fluency performance accounting for the variance in CD4 level at Visit 1. When depression severity on the CES-D was entered as an additional variable, N-Ψ performance still accounted for the majority of variance in CD4 levels, although CES-D accounted for an additional 20%

of the variance ($r=0.95$, $P<0.001$). N-Ψ performance was not retained as one of the predictors of CES-D status because CD4 levels and severity of drug use accounted for most of the variance in CES-D. Patients on HAART therapy exhibited much stronger N-Ψ performance compared with those on alternative therapies ($P<0.01$), and CES-D and drug history did not contribute to this effect. **Conclusions:** The present results demonstrate that CD4 levels in patients who have AIDS with $CD4<100$ are directly associated with N-Ψ status, suggesting that severity of immunocompromise affects brain function. The introduction of HAART therapy in this cohort appears to improve cognitive function, suggesting that the neuropathological changes in many of these patients may be reversible.

7. Tacrolimus Toxicity Associated with Antidepressant Treatment

J.V. Campo, MD, FAPM; C. Smith, MD; J.M. Perel, PhD

Objective: To describe the first case of tacrolimus toxicity associated with the use of nefazodone, an antidepressant medication that has been shown to inhibit the metabolism of various drug substrates of cytochrome P450 3A4 isoenzyme, and discuss the use of alternative antidepressant selective serotonin reuptake inhibitors (SSRIs) in organ transplantation. **Design:** Single case report. **Setting:** Inpatient pediatric hospital. **Subject:** A 16-year-old white male with a history of familial membranoproliferative glomerulonephritis and cadaveric renal transplantation who was maintained on tacrolimus and later begun on nefazodone because of a history of depression and suicidality. **Results:** The addition of nefazodone to an apparently stable tacrolimus regimen was associated with the development of tacrolimus toxicity manifested by acute renal failure and delirium and a four- to fivefold increase in the serum level of tacrolimus. Discontinuation of the nefazodone coincided with a significant decrease in tacrolimus level, a return to baseline renal status, and resolution of the patient's delirium. The addition of paroxetine, an SSRI and P450 2D6 substrate, had no apparent effect on the level of tacrolimus. **Conclusions:** Nefazodone, a known P450 3A4 isoenzyme substrate, may inhibit tacrolimus metabolism and precipitate toxicity. Clinicians treating depression in the context of organ transplantation should be alert to the risk of tacrolimus or cyclosporine toxicity developing in association with nefazodone and other potential inhibitors of the cytochrome P450 3A subfamily of isoenzymes such as the SSRI antidepressants. Paroxetine, an SSRI with no history of clinically significant P450 3A4 inhibition, may

be a notable exception and a reasonable antidepressant choice for individuals taking tacrolimus.

8. Gender Differences Among a Sample of Military Personnel Deployed or Not Deployed to the Persian Gulf

C.P. Carney, MD; J. Allen, BA; W. Clark, PhD; R. Woolson, PhD; D. Barrett, PhD; J. Merchant, MD; D. Schwartz, MD; B. Doebbeling, MD

Objective: Relatively little is known about the consequences of military service on health status of women serving in combat, compared with men. The Persian Gulf War (PGW) was unique in that it was the first military conflict using significant numbers of women in combat and frontline roles. The purpose of this analysis was to compare the self-reported health status and medical conditions between men and women deployed to the Persian Gulf Theatre during Operation Desert Shield/Desert Storm. Comparisons were also made between women deployed to the PGW and women not deployed. **Methods:** We surveyed a stratified, random sample of 3,695 activated military personnel deployed or not deployed to the PGW. A structured telephone survey was performed 5 years after the PGW to assess health-related quality of life, self-reported symptoms, and a priori medical and mental health outcomes. **Results:** Among deployed men and women, women had significantly lower MOS SF-36 scores for Physical Functioning ($\beta = -3.1$, $P = 0.005$), Physical Role ($\beta = -4.9$, $P = 0.029$), and Vitality ($\beta = -4.3$, $P = 0.004$). Deployed women had higher rates than men for a priori outcomes of symptoms of chronic fatigue (OR = 3.2; CI₉₅: 1.0–10.0), anxiety (OR = 2.1; CI₉₅: 1.1–4.2) sexual discomfort (OR = 6.9; CI₉₅: 2.9–16.2), but fewer injuries (OR = 0.6; CI₉₅: 0.4–0.9). In the subsample of women only ($N = 320$), deployed women had higher rates of symptoms of PTSD (adjusted OR = 5.8; CI₉₅: 1.5–23.1), adjusting for age, race, branch of service, duty status (regular military), and preparedness. None of the other 10 a priori conditions was significantly more common among deployed women, although certain wide confidence intervals suggest that power to detect differences was low for some comparisons (e.g., chronic fatigue [adjusted OR = 1.9; CI₉₅: 0.3–14.8]). **Conclusions:** There were relatively few differences in a priori health outcomes between women deployed vs. those activated/not deployed to the PGW, although the lack of significant differences may reflect Type II error (low power) for some comparisons.

9. Receipt of Recommended Clinical Preventive Services by Persons with Mental Disorders

C.P. Carney, MD; B. Doebbeling, MD; J. Allen, BA; H. Nichols

Objective: Persons with mental illness may be at risk for failure to receive basic primary medical care, including the delivery of clinical preventive services (CPS). CPS have successfully reduced morbidity and mortality due to both natural and unnatural causes. We evaluated the delivery of specific CPS by healthcare providers to persons receiving primary treatment of a mental disorder. **Methods:** Consecutive patients with mental disorders presenting for inpatient, outpatient, and substance abuse treatment were asked to complete an instrument that assessed previous receipt of smoking and alcohol counseling, immunizations, and cancer screening based on guidelines provided by the U.S. Preventive Services Task Force. **Results:** Completing the survey were 164 women and 121 men (74% participation rate). The majority of subjects were white (94%), single or divorced (45% and 24%), had a high school education or less (55%), were current or ex-smokers (59%), and had one of the affective disorders (39%). Of current smokers (41%), only 58% reported that a doctor had ever provided smoking cessation counseling. Of the subjects receiving tobacco counseling, only one reported that a psychiatrist had delivered the advice. Importantly, 45% of smokers reported interest in smoking cessation. Although 33% of the sample reported drinking one or more alcohol servings daily, only 30% of these had received alcohol counseling. Less than one-third (29%) of the entire sample reported that any doctor had reviewed their vaccinations in the last year. Three-fourths (78%) were up-to-date with tetanus boosters. However, only one-third (33%) of those persons with indications for pneumococcal immunization and 43% for influenza vaccination had received these services. Interestingly, 41% of subjects meeting hepatitis B immunization guidelines had received at least one dose. The majority (76%) of eligible women (>49 years) had received a mammogram in the last year and had been instructed in breast self-examination (81%). Most eligible women (86%) reported a Pap smear within the last 2 years. Fewer than half the subjects over age 50 had received a flexible sigmoidoscopy or fecal occult blood testing (40% and 43%, respectively). Subjects reported infrequent counseling concerning safe sex, diet, exercise, alcohol use, and firearms. Fewer than 4% reported ever refusing a preventive service when offered. The majority (>75%) believed immunizations and cancer screening to be effective. **Con-**

clusions: Although patients presenting for treatment of primary psychiatric disorders believe CPS to be effective, rates of certain immunizations, colorectal cancer screening, smoking cessation counseling, and safety counseling are generally low. Psychiatrists may need to inquire about CPS in patients presenting for treatment to avoid lost opportunities for prevention. Specific factors associated with failure to receive CPS are currently under investigation.

10. Transplantation in Patients with Histories of Psychotic Disorder

K.L. Coffman, MD, C.C. Crone, MD

A survey was sent to transplant programs in the United States and Canada regarding experience with patients with preexisting psychotic disorders. There were 17 cases reported from eight centers. The diagnoses included: schizophrenia (7), bipolar disorder (5), schizoaffective disorder (2), major depression with psychotic features (2), and psychotic disorder NOS (1). The average age at onset of the psychiatric disorder was 23.7 years. The average age at transplant was 42.6 years. There were 11 men and 6 women. Marital status was as follows: 7 married, 8 single, and 2 divorced. Psychotic symptoms were present up until the time of transplant in 8 patients (47.1%). The average educational level was 12.1 years. Psychiatric problems prior to transplant included 6 (35.3%) with poor support systems, 3 (17.6%) with history of assaultiveness, 4 (23.5%) with previous suicide attempts, 2 with borderline traits, 2 with antisocial behavior, 5 (29.4%) with negative psychotic symptoms, 8 (47.1%) with major mood disorders, 3 with family history of schizophrenia, and 6 (35.3%) with repeated psychiatric hospitalizations. Noncompliance was a big problem even before transplantation, with: psychiatric medications (9; 52.9%), psychiatric appointments (8; 47.1%), other medications (6; 35.3%), and procedures or laboratory tests (5; 29.4%). Postoperative compliance was not statistically better. Adverse psychiatric events after transplant included 9 (52.9%) with manic or psychotic episodes, 5 (29.4%) with suicide attempts (two patients were successful), 1 with assaultive behavior, 3 (17.6%) with severe depressive or catatonic episodes, 1 arrested for disorderly conduct, and 1 committed. Noncompliance resulted in rejection episodes in 4 (23.5%) and in reduced function or loss of the organ in 3 (17.6%). There was one death due to noncompliance with immunosuppressive drugs. Problems with the following arose after transplants: paranoid ideas interfering with taking medications in 6 (35.3%), ideas of reference or suspicion affecting rapport with the

transplant team in 5 (29.4%), delusions interfering with incorporation of the organ in 1 patient, and delusions affecting self-care in 5 (29.4%). Comorbid alcoholism was noted in 3 patients (17.6%), tobacco in 5 (29.4%), stimulant abuse in 3 (17.6%), opiate dependence in 1 patient who overdosed on methadone and clonidine, and sedative dependence in 1 patient. Living alone or being homeless, vs. living with another person correlated highly with non-compliance with immunosuppressive drugs (noncompliance in 83.3% vs. 9.1%). Overall, only 28.6% of schizophrenic subjects were compliant, compared with 60% of the bipolar patients. There were 2 suicides: 1 schizophrenic (14.3%) and 1 schizoaffective patient (50%). The small sample size so far precludes further conclusions at this time. Many of these patients were approved by psychiatrists without transplant experience who did not know the patients before their evaluation.

11. An Advance Directive Performance Improvement Program: A New Role for the Bioethics Committee

M.A.A. Cohen, MD, FAPM; C.A. Alfonso, MD, FAPM; P. Hergenroeder, MD; L. Phillips, MD; L.W. Fung, CSW; R. Oldak, PhD; G. Marcelin, BSW

Communication about advance directives and end-of-life preferences can be beneficial to patients, their families, and their caregivers. Advance directives empower patients to continue to self-determine even when they lose capacity. However, discussing and planning for care at the end of life is difficult for many individuals. This difficulty often leads to obstacles and to misunderstandings about advance directives, sometimes resulting in the need for Ethics consultations. The Bioethics Committee at an AIDS long-term care facility turned attention to advance directives by planning an Advance Directive Performance Improvement Program. The Bioethics Committee assigned an Advance Directive Performance Improvement Team to develop and implement a training program and a system for monitoring the prevalence, consistency, and quality of advance directives. The program began with a review of 100% of patient charts (189) at baseline, before training. The Bioethics Committee focused on the program, and the Team provided four formal advance directive seminars for all professional and administrative staff. The Team also provided a formal seminar for patients and informal tutorials for physicians and social workers. The medical director incorporated an expanded list of advance directives into the primary physician's monthly patient assessment form. The Team reviewed 100% of charts before and after train-

ing, reporting each set of results to the Bioethics Committee and implementing changes. Prevalence at baseline was 50.7%, at 1 month was 65.2%, and at 2 months was 77.6%. After the new Assessment Form was introduced, prevalence increased to 85.6%, 8 months after the baseline review. The increase was significant at the 0.001 level. The mean age of the patients was 43.28 years. There was no significant difference in the prevalence of advance directives the African Americans, Latino-Americans, Caucasians, or other ethnicity. An advance directive performance improvement program can result in enhancing the prevalence and quality of advance directives and can serve as a model for other bioethics committees in order to improve communication about care at the end of life.

12. Effect of Beta-Adrenergic Blockade on Cognitive Function in Graves' Disease

K.L. Cozza, MD; R.M. Tuttle, MD; C.W. Anthony, MD; C. Tuman

Thyrotoxicosis is often associated with clinically apparent impairment in concentration and cognition. Because of these cognitive impairments, we have questioned whether thyrotoxic patients can fully participate in the selection of definitive therapy for their disease. We hypothesized that the hyperadrenergic state induced by excess thyroid hormone would contribute to this impairment in cognitive function. The objective of this study was to determine whether a measurable improvement in cognitive function could be induced by adequate beta-adrenergic blockade. **Methods:** Twenty patients with newly diagnosed Graves' disease underwent standardized cognitive function testing with the Stroop Color-Word Test, Reitan Trailmaking Test, and the Folstein Mini-Mental State Exam before and after adequate beta-blockade with propranolol. An age- and gender-matched control group was studied without propranolol. **Results:** Thyrotoxic patients demonstrated significantly more cognitive dysfunction on both the Reitan Trail B (75 ± 8 vs. $57 \pm$ seconds; $P=0.03$) and the Color-Word Score (43 ± 1.5 vs. 49 ± 3 correct responses/45 seconds, $P=0.04$) than control subjects. There was no significant correlation between these measures of cognitive function and any physiologic or laboratory parameter measured. Thyrotoxic patients had a significant decline in pulse in response to propranolol (95 ± 5 to 73 ± 2 beats per minute) but did not have a significant improvement in any measure of cognitive function. **Conclusions:** Thyrotoxicosis is associated with a measurable decline in cognitive function that does not correlate with other physiologic

manifestations of the disease. Cognitive function seems to return to normal range once thyroid function tests return to normal range. Although beta-adrenergic blockade markedly improves the signs and symptoms of thyrotoxicosis, it is not associated with an improvement in cognitive function. It is imperative that healthcare providers recognize that cognitive dysfunction may still be present despite marked physiologic improvement seen with beta-adrenergic blockade. Our ongoing research and future research needs are discussed regarding capacity for informed consent under these circumstances.

13. The Modulatory Effects of Depression and Chronic Clinical Pain on Central Processing of Acutely Painful Stimuli

C. Dickens, MRCP, MRCPsych; F. Creed, MD; A. Jones, MD

Background: Studies of Event Related Potentials (ERPs) indicate that the cingulate cortex is important in processing responses to acutely painful stimuli. The amplitudes of such responses are modifiable by analgesics and cognitive distraction techniques. Positron Emission Tomography (PET) studies indicate that cingulate responses to acute pain are damped in subjects with rheumatoid arthritis (RA) but amplified in subjects with atypical facial pain (AFP). Endogenous opioid release has been suggested to be responsible for the damping effect in RA. We speculate that the lack of definite peripheral pathology and the high levels of depression found in AFP patients may result in up-regulation of central responses to acute pain. We aimed to investigate the possible modulatory effects of chronic clinical pain and depression on acute experimental pain in patients with RA. **Methods:** Sixteen patients with RA and 14 healthy control subjects, all right-handed, and age 18 and 75 were studied. Subjects underwent a detailed assessment of physical state (including subjective measures of clinical pain intensity by use of visual analog scales) and completed the Hospital Anxiety and Depression scale. A CO₂ laser with variable-power output, a beam of 1-cm. diameter, and 150 msec. duration was used to generate non-painful and painful stimuli of varying intensities. One hundred eighty stimuli of varying intensities were delivered in random order to a standardized rectangular area of skin on the dorsum of the right forearm. Subjects were instructed to report the intensity of each stimulus on a scale of 0 (no sensation) to 10 (unbearable pain). Pain-evoked potentials were recorded from the vertex of the cranium; the source of these potentials lies at or near the cingulate. **Results:**

Four major ERP components were identified. These occurred, on average, 98 msec. (positive), 146 msec. (negative), 242 msec. (positive), and 446 msec. (negative) after the stimulus. The amplitudes of these four components were compared between groups and related to stimulus and clinical parameters. Systematic increases in amplitudes of these components were found in patients as well as in normal controls. Once the level of pain experienced was controlled, there was no significant difference between patients and controls with regards to the amplitudes of ERPs for any given level of stimulus, despite differences in clinical pain, mood scores, and medication usage. We found no trend for anxiety or depression to be associated with increased amplitudes of the ERP components or for clinical pain to damp these central responses. **Discussion:** Our findings are in conflict with studies indicating that cingulate/vertex responses to pain are modified by analgesics and in different clinical states. This finding is probably due to our methodology, which enabled close control for the level of pain experienced with each stimulus and which has been overlooked in most previous studies. These findings are in agreement with recent PET data showing that pain experience is the main determinant of cortical response to noxious stimuli. Repeat assessments on this cohort of subjects are planned, and this may reveal more subtle modifying effects of depression and clinical pain state.

14. Body Image in Septo-rhinoplastic Operations: A Pilot Study

A. Diefenbacher, MD; C. Werning; I. Deusinger, PhD; B. Hell, MD

Issue: Indications for septo-rhinoplastic operations for functional reasons (i.e., disturbances in nasal ventilation) or aesthetic reasons may be confounded by psychological factors. Surgeons keep asking consultation psychiatrists to help in identifying patients at risk for postoperative psychological problems. Body image may play an important role in surgical outcome in septo-rhinoplasty. **Aim:** To study body image in patients after septo-rhinoplastic operation for functional or aesthetic reasons. **Material & Methods:** 47 patients (22 male, 25 female) were studied with the Frankfurter Körperkonzept Skala (FKKS, Frankfurt Body Image Scale), a self-report scale with a total of 64 items (e.g., "I suffer from more physical stigmata than others do"; "I am not very attractive"), divided into nine subscales (e.g., aspects of bodily appearance, self-care dissimulative processes). The FKKS is used to describe a summary "positive," "neutral," or "negative" body image.

Results: Mostly, judgments about shape of nose and ventilation were just as improved by patients as well as surgeons (Hell et al, in preparation). According to the FKKS, patients in the aesthetic-indication group preoperatively showed lower self-acceptance and perceived lower acceptance of their bodily appearance by others. They felt less well with regard to overall health and showed less satisfaction with their sexual performance. Overall, a positive body image, as measured by the FKKS, correlated with a more positive acceptance of the results of surgery. **Conclusion:** The FKKS seemed to be useful in differentiating between patients with functional and aesthetic reasons for surgery and showed correlations in aspects of a positive body image with perceived positive results of surgery and postsurgical well-being. Further prospective studies with the FKKS pre- and postsurgery in larger samples seem to be justified and could help to clarify the implications of body image for psychiatric consultation in patients for septo-rhinoplastic surgery.

15. Vascular Dementia of the Noninfarct Subtype

V.O.B. Emery, PhD; E.X. Gillie, MD; J.A. Smith, MD

This paper focuses on some of the long-standing problems that exist in the classification of the vascular dementias. To contribute to the definition of vascular dementia, mental status and other cognitive processes were investigated in 12 single-infarct patients (mean age 74.8), 17 multiple-infarct patients (mean age 71.4), 21 vascular patients with no cerebral infarction (mean age 76.9), and 16 normal elderly subjects (mean age 70.4). The null hypotheses/hypotheses tested were 1) the cognitive impairment of each of these three populations of vascular patients is not/is greater than, and outside the range of, normal aging; 2) there are/are not significant differences between these three vascular populations on cognitive measures. Measures used included the Mini-Mental State Exam, Dementia Rating Scale, Western Aphasia Battery, and Boston Naming Test. Results indicate that vascular disorders involve a decrement in mental status and other cognitive functions that is significantly greater than the age-associated impairment of normal aging. Also, results from the study indicate that there were no robust, reliable significant differences between single-infarct, multi-infarct, and non-infarct patients. Findings suggest that multi-infarct dementia is only one subtype of vascular dementia. A new subtype of vascular dementia is described and termed "noninfarct vascular dementia." The data evidence that a subset of cases of vascular dementia evolve in the absence

of actual cerebral infarction. Noninfarct vascular dementia represents a pathway to the phenotype of vascular dementia. It appears that vascular dementia is an overarching category that subsumes a greater number of vascular disorders than can be accounted for by the cerebral infarct concept. The data presented suggest that multiple infarction is only one proximal causes of vascular dementia, while several other factors, such as arteriosclerosis or chronic sustained hypertension/hypotension appear to play a role in the distal causality of some cases of vascular dementia. Authors reevaluate the distinction between local and generalized or diffused cerebral lesions.

16. Changes in Health-Related Behaviors After Treatment for Breast Cancer

S.A. Epstein, MD, FAPM; J. Rowland, PhD; J. Krupnick, PhD; P. Stockton, PhD; B.L. Green, PhD

Introduction: In studies of breast cancer survivors, C–L psychiatrists have traditionally focused on adverse psychiatric sequelae. Little is known about how the experience of diagnosis and treatment of breast cancer affects health-related behaviors. In the present study, we describe prevalence and predictors of changes in health-related behaviors among women who had recently been treated for breast cancer. **Methods:** One hundred sixty women were evaluated an average of 7 months after diagnosis and treatment for early-stage breast cancer. As part of a study investigating psychiatric sequelae of breast cancer, they completed a self-report battery that assessed demographic information, attributions, and worries about breast cancer, and changes in health practices since diagnosis. All women completed the Structured Clinical Interview for DSM-III-R (SCID) to assess current and lifetime psychiatric disorders. **Results:** Specific health practices that were reported to be altered post-cancer by greater than 50% of women were limited to reading more health books (61%) and decreasing fat intake (57%). However, 25%–50% of women reported making such modifications as decreasing their intake of alcohol, caffeine, beef/pork, and/or cholesterol; increasing consumption of fruits, vegetables, grains and/or vitamins; and increasing attendance at health workshops. Less than 25% reported increasing stress-reducing activities, increasing exercise, increasing sunscreen use, and/or decreasing salt intake. Fifty percent of women believed they contributed, at least to some extent, to their development of cancer (e.g., due to lifestyle or stress). The intensity of this belief correlated significantly with decreasing alcohol intake ($r=0.41$) and increasing vegetables

($r=0.24$); this belief had near-significant correlations with increasing grains, decreasing beef/pork, and increasing attendance at health workshops. Women who believed they contributed to developing their cancer were also significantly more likely to be younger ($r=0.25$), to have a prior psychiatric history ($r=0.31$), and to worry more about recurrence ($r=0.29$). **Conclusions:** Most women do not significantly alter general health practices after diagnosis and treatment for early-stage breast cancer. Younger women and women with a prior psychiatric history are more likely to believe they had a contribution to developing cancer. Women who believe they contributed to their own cancer are more likely to worry about recurrence but also more likely to improve some health practices. Some women may not have altered health practices because they had good health practices before diagnosis of cancer. However, some health-enhancing behaviors appear to be linked to the belief that one has contributed to the development of cancer.

17. Neuropsychological Function and Management of Antiretrovirals in HIV Infection

S. J. Ferrando, MD; M. McElhiney, MA; J.G. Rabkin, PhD

Objective: To determine if HIV+ individuals who have difficulty on an objective assessment of ability to manage antiretroviral medications would have lower scores on neuropsychological (NP) tests than those without such difficulty. **Method:** In an ongoing research study of men with HIV and AIDS, 91 nondemented subjects were administered a standardized 15-minute medication-management test (MMT) designed to objectively assess abilities in two areas: “pill dispensing,” which is the ability to correctly count, sort, and dispense pills according to a prescription, and “medication inference,” which is the ability to answer specific questions about medication supply and labeling information and about an over-the-counter insert. Subjects were rated as outliers if they scored one standard deviation lower than the group mean on this task. They were also given a battery of neuropsychiatric (NP) tests assessing attention, concentration, verbal memory and learning, and psychomotor speed and executive function, as well as ratings of mood (Beck Depression) and HIV symptoms. **Results:** Mean age was 41 ± 8 years; 40% were ethnic minorities; mean years of education was 15 ± 3 ; mean CD4 was 400 ± 254 ; and mean Log₁₀ HIV RNA was 3.6 ± 1 . Thirteen (14%) of the men were outliers on the MMT. Outliers on the MMT were significantly older than non-outliers, but the groups did not differ in CD4, Log₁₀

HIV RNA, HIV symptoms, or Beck Depression scores. In analysis of variance, using age and education as covariates, outliers on the MMT scored significantly worse than non-outliers on several domains of the California Verbal Learning Test, which assesses verbal memory and learning. **Conclusion:** Ability to manage antiretroviral medications for HIV infection may be adversely affected by impairment in NP function, particularly memory and learning. This has important implications for understanding potential barriers to adherence to complex antiretroviral regimens.

18. Tumor Markers: What the Psycho-Oncologist Needs to Know

D.L. Fertig, MD; D.F. Hayes, MD

Tumor markers are defined as genetic and/or biochemical changes that can be identified in association with a neoplastic deviation from normalcy. The development of new technologies has resulted in examples of potentially useful markers for a variety of clinical situations, including estimates of the risk, presence, status, or future behavior of malignancy. Ostensibly, marker results should allow clinicians to provide better care than if they were unaware of these data. Unfortunately, tumor-marker results are often obtained without consideration of the clinical consequence that they might effect. Along with this exciting new technology comes the need to be aware of the psychological impact of conveying information about the status of these tumor markers to patients. Data from studies of screening and risk assessment in oncology can provide clues into how tumor-marker tests might affect patients. Clearly, this is a fertile and important area for research and one that will become increasingly important in the future as biotechnological advances proceed. In the meantime, it is critical that oncologists clarify whether the benefits of obtaining a diagnostic tumor-marker result for a given patient and clinical situation outweigh the risks. The psycho-oncologist can perform an important role in advising clinicians and patients on the psychological considerations in obtaining and using this information.

19. Cluster B Personality Traits and Outcome of Liver Transplantation

M. Fireman, MD; J.M. Rabkin, MD; R.M. Atkinson, MD

Psychosocial selection criteria in individuals undergoing solid-organ transplantation remains a controversial area. Individuals with Cluster B personality disorders (borderline, narcissistic, histrionic, and antisocial) have traditionally been difficult to care for in both medical and psy-

chiatric settings. Organ transplantation has been traditionally described as one of the most difficult procedures, both medically and psychologically. There have never been any strict criteria with regard to personality disorder diagnosis and suitability of an individual for solid-organ transplantation. Transplant services have questioned whether these individuals will demonstrate posttransplant behavioral problems that may compromise the transplanted organ. There appears to be no consensus within the transplant community regarding selection criteria for individuals with these personality disorder diagnoses. All patients transplanted at our center receive comprehensive psychiatric and psychosocial evaluations consisting of record review and patient and family interviews. All patients are evaluated by both a transplant social worker and a transplant psychiatrist. In many cases, evaluation by a chemical-dependency specialist is required as well. Particular attention is paid to childhood and adult functioning, including academic, employment, and legal history; history of alcohol and substance abuse; marital and relationship history; psychiatric history; and history of compliance with medical care. Diagnosis of a personality disorder, even with this comprehensive assessment, is often difficult; many times, however, significant traits are identified. In this study, diagnostic criteria according to DSM-IV were used. Records of all patients transplanted between 1988 and 1997 (approximately 400) at a combined University/VA liver transplant center were reviewed for this study. Twenty-nine patients were identified on pretransplant psychiatric and psychosocial evaluations with either diagnoses of Cluster B personality disorders or with significant Cluster B traits. Twenty-four patients were male, five were female. Two of the male patients were described as narcissistic; the other 22 were considered to have significant antisocial traits. Four female patients were described as borderline; one had mainly antisocial traits. All 29 patients were diagnosed preoperatively with alcohol and/or substance use disorders. Medical issues addressed at follow-up included length of initial posttransplant hospitalization, nature and number of medical complications, and length of survival posttransplant. Medical compliance, posttransplant use of alcohol and drugs, as well as posttransplant psychiatric complications, were examined. Results for these patients show that length of initial posttransplant hospitalization, medical complications, and length of survival posttransplant do not differ from the general liver transplant population. However, 25 of the 29 patients have had problems with medical noncompliance and/or use of alcohol and drugs. Eighteen patients have had difficulty with both alcohol/substance

abuse relapse as well as medical noncompliance. Another four patients have had difficulty with relapse but have remained medically compliant. Three patients have had difficulty with compliance but have remained abstinent from alcohol/drugs. Posttransplant psychiatric consultation has been necessary in 15 patients. Only three patients are described without difficulties in these areas. All 29 are alive and medically stable at this time. Average length of survival since transplant is 3 years, with a range of 1 to 7 years. In summary, it appears that patients with histories of Cluster B personality disorder or significant Cluster B traits appear to be at increased risk for medical noncompliance and posttransplant use of alcohol and drugs, compared with other patients. It is of interest that the incidence and nature of medical complications, length of initial posttransplant hospitalization, and survival of these patients compares favorably with other patients.

20. Alcohol and Substance Abuse Relapse Following Liver Transplantation

M. Fireman, MD; J.M. Rabkin, MD; R.M. Atkinson, MD

Organ transplantation in individuals with histories of alcoholism and other substance use disorders remains controversial. Criteria for patient selection vary from program to program. Prediction of relapse risk in these individuals is difficult and problematic, but important in the selection process. This study analyzes patients with known relapse with use of alcohol or other substances following liver transplant. Those patients who did not relapse were also studied. All patients evaluated for transplant at our center, a regional VA transplant center, receive comprehensive psychiatric evaluation. Issues of alcohol and substance use and risk of relapse receive close attention; 89/132 patients (67%) transplanted between 1988 and 1996 at this center were diagnosed with preoperative histories of alcohol and/or other substance use disorders; of these, 61 were diagnosed with alcohol dependence, and 28 were diagnosed with polysubstance dependence. Individuals who did not survive more than 1 year posttransplant were excluded from the study. Relapse was documented by positive alcohol or drug screen. Forty-five of the 61 patients with alcohol dependence survived longer than 1 year and were included in the study. To date, 11 patients have documented relapse; 8 with use of alcohol, 1 with alcohol and polysubstance use, 1 used marijuana, and 1 with use of amphetamines. All patients were male; average age was 46 years. Average length of sobriety before transplant was 2.75 years. Seven patients had had treatment for chemical

dependency before transplant evaluation; four claimed to continue treatment posttransplant. 4/11 described stable job histories, 6/11 described stable living situations; 8/11 had been diagnosed with a history of psychiatric illness at the time of the initial transplant evaluation. Those patients ($n = 34$) with alcohol dependence who did not relapse were also studied. This group's pretransplant patterns of alcohol use, treatment history, length of sobriety, and reasons for discontinuing alcohol use were similar to the study group. These patients were all men, with an average of 48 years. Average length of sobriety before transplant was 2.7 years. Fifteen patients had had treatment for chemical dependency before transplant evaluation; eight stated they remained in treatment posttransplant; 31/34 described stable living situations, and 30/34 had stable work histories; 14/34 had been diagnosed with a history of psychiatric illness at the time of the initial transplant evaluation; 26 of the 28 patients diagnosed with polysubstance dependence survived longer than 1 year posttransplant and were studied. To date, 19 patients have had documented relapse; 6 with use of marijuana, 3 have used alcohol, 2 used heroin, 6 have abused prescription drugs, 1 patient used cocaine, and 1 patient amphetamines. All patients were men, with an average age of 42 years. Average length of sobriety before transplant was 2.2 years. Thirteen patients had completed at least one chemical dependency treatment program before transplant evaluation. Two patients stated they remained in treatment posttransplant; 8/19 patients described stable living situations; only 4 patients described stable work histories; 16/19 patients were diagnosed with a history of psychiatric illness at the time of the initial transplant evaluation. The seven patients who are not known to have relapsed, to date, were studied. Unfortunately, they do not constitute an appropriate comparison group. Data are lacking with regard to four of the patients; the other three appear to have no evidence of relapse. This study indicates that traditional predictors of relapse risk may be predictive in this patient population as well. Factors such as comorbid, untreated psychiatric disorder, lack of stable living situation, and lack of employment or other substitute activities may indicate increased risk for relapse after liver transplantation. In this study, patients with polysubstance dependence appear to have a poorer prognosis for long-term abstinence.

21. Why Should Generalized Anxiety Disorder Be Part of Hypochondriacal Syndromes?

F. Gagnon, MD, FRCP(C); M.H. Freeston, PhD; R. Ladouceur, PhD; J. Rhéaume, PhD; N. Thibodeau, MD, FRCP(C)

Hypochondriasis is a complex phenomenon with different health-related attitudes producing different clinical presentations. Some authors prefer to talk about hypochondriacal syndromes including illness phobia, panic disorder, and obsessive-compulsive disorder. We have demonstrated in the past that health-related intrusive thoughts are very prevalent among patients (75%) and escorts (55%) recruited in a hospital setting as well as among university students (61%), supporting cognitive-behavioral models of hypochondriasis and health anxiety. In the present study, structured interviews were used to collect sociodemographic and clinical data in three groups of patients ($N=88$): primary generalized anxiety disorder (GAD) patients ($n=23$), secondary GAD patients ($n=24$), and other anxiety patients ($n=41$). Specifically, education, employment, marital status, consultation history, and comorbidity were compared in the three patient groups. These findings show that: 1) primary GAD patients reported less impairment in the areas of education, employment, and family than secondary GAD patients and other anxiety disorder patients; 2) GAD patients (both primary and secondary) consulted general practitioners more than other anxiety patients; and 3) GAD (both primary and secondary) was associated with more comorbidity than other anxiety disorders. Considering this mixed picture, the term "worried well," often associated with GAD patients, does not seem adequately to describe this population. The data regarding number of medical consultations (57% of GAD patients consulted a GP) and comorbid disorders suggest that GAD patients are more distressed than generally believed. GAD is often not identified by health professionals. In fact, very often patients do not see worrying as their central problem because they consult for physical symptoms, and professionals do not distinguish normal situational worry from chronic excessive worry even when the patients "worry too much" about their health. We will discuss the interface among GAD, OCD, and hypochondriasis.

22. Impact of Informed Consent for Psychiatric Consultation on Patient Care and Satisfaction

D.F. Gitlin, MD, FAPM; L.L.M. Worley, MD, FAPM

A large percentage of patients admitted to a tertiary care medical service will receive at least one consultation,

and several will see multiple consultants. Requesting physicians and house staff may, as a result, overlook the importance of informing their patients about this intervention and obtaining informed consent. The value of these consultations may be adversely affected by this. This may be especially true of consultations that the patient feels do not address their primary reason for being hospitalized. The psychiatric consultation may be the most common example of an unwanted intervention. The patient enters the hospital with a serious set of somatic symptoms and may feel stigmatized or insulted by the appearance of a psychiatrist. Many physicians presume the psychiatric consultation will be undesirable to the patient, leading to a pattern of avoidance and devaluation by the physician. This study attempts to look at the process of informing patients about impending consultations and whether being informed affects the patient's perception of its value. The authors studied 200 consultations to medical/surgical patients in two geographically distinct university hospitals. One hundred of these were psychiatric consultations, with 100 control subjects from various other medical or surgical consultation services, including gastroenterology and ophthalmology. Both patients and requesting physicians were questioned about whether the patient had been informed about the consultation request, their reaction to the request, and their overall perception of the value of the consultation. Comparisons between psychiatric and nonpsychiatric services were analyzed, as well as comparisons between informed and uninformed patients. The results suggest that although patients are least well-informed about psychiatric consultations, they are poorly informed about all consultations, and that this lack of information diminishes the value of the consultation. Authors discuss implications for both psychiatric and medical consultations practice.

23. Consultation-Liaison Fellowship in Primary Care: A Review of the Long Island Jewish Medical Center's Experience

J.H. Gordon, MD; M. Waisman, MD; R.G. Hoffman, MD; S.A. Cole, MD, FAPM

The growth of managed care has changed the structure of the healthcare system and has led to a new emphasis on primary care medicine. In order to function effectively within this new medical system, C-L psychiatrists need to have increased collaboration with primary care physicians. Studies have repeatedly shown that the majority of patients with psychiatric illness see a healthcare professional in a primary care setting rather than seeing a mental healthcare

specialist. The presence of the C–L psychiatrist in the primary care setting is, therefore, essential for the comprehensive treatment of patients. Few consultation–liaison programs, however, offer training in outpatient primary care clinics. For the past 4 years, the C–L service at Long Island Jewish Medical Center has offered a Primary Care track within the C–L fellowship program. This poster will review the objectives of the Primary Care track and discuss the training models that have been most helpful for meeting our objectives. The Primary Care track involves the placement of two C–L fellows in the outpatient hospital clinic where they see medical patients with the primary care residents. The C–L fellows, using a collaborative model, work with several residents during each clinic session and see patients with medical problems as well as patients with psychiatric disorders. The fellows also train with a senior primary care physician and see medical patients in the physician's private office. An important part of the training involves teaching primary care residents and medical students. Our main conclusions regarding training C–L fellows in primary care are 1) An on-site psychiatry C–L fellow working in collaboration with the primary care resident leads to better recognition and treatment of patients with psychiatric problems. 2) A most effective teaching technique was to have an on-site psychiatry C–L fellow model how to obtain a psychosocial history and how to address psychological issues affecting medical management. 3) The primary care residents' interest in our monthly seminars greatly increased after we began utilizing patients from their clinic to demonstrate common psychiatric problems in medical patients.

24. Iatrogenic Acute Estrogen Deficiency and Psychiatric Syndromes in Breast Cancer Patients

L.R. Sheingold, MD; D.B. Greenberg, MD, FAPM; J. Younger, MD; M. Ferraro, BA

Treatment for breast cancer often precipitates estrogen deficiency, either because ovaries fail during adjuvant chemotherapy of premenopausal women or because estrogen replacement in postmenopausal women is stopped and the anti-estrogen medication, tamoxifen, is started. Because estrogen can promote growth of tumor cells, estrogen replacement is contraindicated. We describe the course of menopausal symptoms and the incidence of mood disorder as 15 premenopausal and 6 postmenopausal patients became estrogen-deficient during treatment for breast cancer. Patients were evaluated initially by a psychiatrist's Structured Clinical Interview for Diagnostic Statistical Manual.

Acute menopausal symptoms, menses, meaning of menopause, and mood were assessed every 2 months over 2 years. Eight of 21 patients (38%) developed a major depressive episode, the majority within the first 6 months of starting treatment. Fourteen of 21 patients (67%) had hot flashes after an average of 4 months of treatment. We conclude that iatrogenic estrogen deficiency in the treatment of breast cancer is a major cause of affective morbidity and that this group should, therefore, be targeted for diagnosis and treatment of depression. Prospective assessment of these patients is continuing.

25. Teaching Psychiatry to Medical Residents: An Innovative Model of Outpatient Consultation

R. J. Gregory, MD

Underrecognition of mental disorders in primary care is widespread and leads to increased morbidity, disability, and healthcare costs. Hence, there is a dire need for improved training of primary care physicians in the recognition and management of mental disorders. The present study describes and evaluates an innovative teaching program for medical residents, comprising a half-day per week for 4 weeks. During their rotation, residents assist a C–L psychiatrist in performing on-site consultations on general-medical clinic patients. Didactics are given in between patients as time permits. To assess program effectiveness, residents ($N=45$) were given questionnaires before and after the rotation assessing their clinical confidence, on a Likert scale, with diagnosing and managing anxiety, depression, alcoholism, and hypochondriasis. All areas improved dramatically during the 4-week rotation ($P<0.001$, paired t -test). Residents felt the rotation helped “quite a bit” or “extremely” in developing “clinical skills that will be useful for [their] future career.” These results suggest that this brief and low-cost teaching model can greatly enhance the clinical confidence of residents dealing with mental disorders, which may, in turn, increase their recognition and treatment of these disorders.

26. Measuring Counterdependency in Chronic Pain

R.J. Gregory, MD; S.L. Berry, BS

Some reports have characterized chronic pain patients as counterdependent—that is, having emotional suppression, idealization of relationships, a strong work ethic, a caregiver role-identity, and self-reliance. However, research has been hampered because formal measures of these traits have been lacking. In the present study, the authors describe a five-item self-report questionnaire

(CDS) designed to elicit each of these traits on a Likert scale. The CDS was administered to 150 consecutive patients evaluated in an outpatient psychiatry consultation program. CDS scores were normally distributed and had significant inter-item correlations and test-retest reliability ($r=0.68$). As expected, patients with chronic pain ($n=100$) had higher mean CDS scores than those without chronic pain ($t=5.6$, $P=0.000$). CDS scores were independent of demographic variables and measures of anxiety, depression, alexithymia, and somatic amplification. These results suggest that counterdependency can be described by a distinct and measurable cluster of traits associated with chronic pain.

27. "I Don't Want to Know": Predicting Risk for Dropout from Genetic Testing for the BRCA 1 and 2 Breast Cancer Genes

E.K. Haase, MD; P.R. Muskin, MD, FAPM; M.A. Ormont, MD, FAPM; E.C. Druss, MD

Objectives: Strategies for delivering genetic testing and counseling of those at risk are in their nascency. This study was designed to determine the psychological profile of women who drop out after genetic counseling and do not receive testing for BRCA 1 and 2 breast cancer mutations. Our hypothesis was that high anxiety and low risk of carrying a mutation would predict dropout after initial counseling. **Methods:** Thirty-six women undergoing genetic counseling and testing for BRCA 1 and 2 received Spielberger State/Trait Anxiety scales, cancer history and risk profiles, a semistructured psychiatric interview, and a live or telephone follow-up interview. Twenty-four of 36 women had not pursued testing at time of analysis; of these, 23 consented to follow-up telephone interviews. These reasons were coded categorically and individually. Also, we examined total Spielberg State/Trait Anxiety score, personal history of breast cancer, and risk for gene mutation as coded by the genetic counselor as predictors of dropout. **Results:** Factors predictive of dropout after genetic counseling were history of breast cancer, (OR 1.9) and lower total anxiety (OR 1.9). Dropout decreased steadily with increased risk of mutation ($P=0.066$). The four most frequently stated reasons for dropout were concerns about insurance coverage (22%), impact of the test results on a familial relationship (19%), interfering illness or life events (19%), and belief that test results would bring intolerable anxiety (19%). **Discussion:** We speculate that lower initial anxiety may reflect a tendency to deny risk after counseling and result in failure to complete the testing process for

some women at risk. Identifying profiles of such women will allow us to develop strategies to counsel more effectively those women for whom testing would be indicated.

28. Dying "Competently": A Look at the Relationship Between Competency Determinations and the Odds of Inpatient Mortality

D.P. Hobson, MD

In a 24-month period, 769 inpatient psychiatric consultations were recorded. Of these 769 inpatients consulted by psychiatry, 49 (6.4%) died during that hospitalization. Twenty (40.8%) of the 49 patients who subsequently died had been described as being incapable of sound healthcare decisions. This compared with only 116 (16.1%) of the 720 inpatients who did not die during the same hospitalization ($\chi^2=17.469$, $P<0.00003$). When examined through the lens of competency for all 769 inpatient consultations, 631 (82.3%) were considered capable of decision-making, whereas 136 (17.7%) were deemed incapable of decision-making, and two could not be adequately assessed. Of the 136 judged not competent, 19 (14.0%) would later die during that hospitalization, compared with 29 (4.6%) of the 631 who were considered competent on psychiatric consultation ($\chi^2=15.201$; $P<0.0001$). Of those psychiatrically consulted patients who died during that hospitalization, 10 (20.4%) of the 49 had been diagnosed as suffering delirium as either a primary or secondary diagnosis. This compared with 58 (8.1%) of the 720 patients who did not die during that hospitalization being diagnosed as suffering delirium (Fisher's exact; $P=0.007$). Also, of in-hospital deaths after psychiatric consultation, 7 (14.3%) of the 49 deaths had a substance-abuse diagnosis, whereas 42 (5.8%) of the 720 live discharges were similarly diagnosed (Fisher's exact; $P=0.030$). Other diagnoses, including dementia, were not statistically significant.

29. The COMPRI: An Instrument for the Prediction of Length of Stay at Admission to the General Hospital

F.J. Huyse, MD, PhD; J.P.J. Slaets, MD; T. Herzog, MD; A. Lobo, MD; P. de Jonge, PhD; P. Fink, MD, PhD; G. Cardoso, MD; M. Rigatelli, MD; N. Balogh, PhD; J.S. Lyons, PhD

Ever since Levitan's paper demonstrated the effectiveness of C-L interventions by reducing length of stay (LOS), C-L psychiatrists have regarded the impact of psychiatric comorbidity on LOS and the possibility of reducing LOS through psychiatric interventions a core argument

toward healthcare providers for the systematic development of the field. Recently, Saravay carefully reviewed the literature and concluded that the evidence of the impact of psychiatric comorbidity is convincing. In a sophisticated epidemiological study by Fink, in Denmark, convincing evidence was found for the linkage between repetitive medical and psychiatric admissions. Fulop argued that to be effective, a C-L psychiatrist should have enough time to reduce the LOS. We have demonstrated, in a multicenter European C-L study in 56 hospitals, that the average time until referral is equal to the average LOS of the non-referred patients. Moreover, these patients' LOS was two to three times longer than average. Consequently, earlier referral could enhance the effectiveness of psychiatric interventions. The European Union has funded a study in 14 hospitals in seven European countries to develop an instrument to predict LOS at admission to internal-medical wards, based on the assumption that among these patients there would be a higher prevalence of psychiatric comorbidity. Such a statistical case-finder will select a population in need of additional assessment for psychiatric and psychosocial vulnerability to be taken into account during the hospital admission and their postdischarge management. On the basis of existing literature, an admission psychosocial risk-screening questionnaire has been developed including sociodemographic, preadmission biopsychosocial risk factors, and core questions of existing psychometric instruments (SCL-8, Whitley-index, MMSE, alcohol screener). These interviews have been conducted in about 2,500 patients. Also, data on medical, nurse, and organizational complexity have been collected. A first single-site analysis resulted in a prototype of 11 questions with a good positive predictive power, and these patients obtained more complex care. During the presentation, the results of the analyses of the total dataset will be presented.

30. Psychiatric Disorders Detected Among Patients Being Weaned from Chronic Ventilator Dependence

R.C. Kaiser, MD; R.T. Goldberg, EdD; A. Flather-Morgan, MD; G.I. Kassels, MD

Over the past three decades, the mechanical ventilator has saved countless lives. Although the majority of patients can be weaned from the ventilator within a few days, a growing minority of patients has required prolonged mechanical ventilation. The morbidity and comorbidity of various psychiatric conditions for this subgroup of individuals is high. Anxiety, panic attacks, depressive symptoms, and confusional states are common among in-

dividuals faced with chronic dyspnea, disability, and varying metabolic dysfunctions. The degree of acute and post-traumatic stress disorder from repeated near-fatal episodes has not been well investigated. We examined 10 consecutive cases admitted to a hospital unit intended to wean patients from chronic ventilator status for the presence of various psychiatric conditions. Subjects were administered the Prime-MD, the Hamilton Depression and Anxiety Scales, the Mini-Mental State Exam, the Anxiety Sensitivity Index, the CAPS scale for PTSD, and a new ventilator-dependency scale (the GKF) after successful ventilator weaning and stabilization. Results of our review will be presented. The impact of various psychopharmacological and cognitive-behavioral treatments will be discussed. This information should spur further research leading to improved recognition and treatment of psychiatric conditions in this ever-increasing patient population.

31. The Use of a Computerized Deliberate Self-Harm Database in a General Hospital Setting

N. Kapur, MBChB, MRCPsych; A. House, DM; D. Storer, FRCPsych; S. Hatcher, MD; D. Bowers, BSc

Background: Deliberate self-harm in the United Kingdom is increasing in incidence, but service provision for this patient group remains inconsistent. One approach to improving quality of care might be to develop an effective system to monitor and feed back performance. We discuss the use of a computerized database service for deliberate self-harm in a large general hospital in Northern England. **Methods:** The computerized database was used to carry out a series of descriptive studies over a 4-year period that examined diagnostic practice, variability in psychiatric management, and outcome of new referrals to local psychiatric services. The findings were then fed back to those involved in carrying out self-harm assessments. **Results:** Simply presenting results from the database to those carrying out assessments had a striking effect on clinical practice. For example, the number of men receiving a diagnosis of depressive disorder was doubled ($P < 0.01$, chi-squared test); the number of personality disorder diagnoses fell by two-thirds ($P < 0.001$, chi-squared test); and the number of individuals discharged without follow-up by on-call psychiatrists was reduced by one-third ($P < 0.02$, chi-squared test). The database was also used to inform service-wide changes, such as improving liaison between hospital-based and community-based psychiatric services. **Conclusion:** A computerized database service is an effective tool in monitoring deliberate self-harm and can im-

prove the quality of care. Such monitoring systems are not without their problems, such as ensuring adequate data capture. Nevertheless, databases could make a significant contribution to the future management of deliberate self-harm and could ensure that it is less arbitrary than it has been in the past.

32. Psychoeducational Intervention for Women at Genetic Risk for Developing Breast and Ovarian Cancer

K.M. Kash, PhD; J.C. Holland, MD, FAPM; D.G. Miller, MD; P. Jacobsen, PhD; M.P. Osborne, MD

Background: Women at a low (15%–20%), moderate (20%–35%), or high (35%–50%) risk for developing breast cancer (because of family histories) are at greater risk than women at average risk (11%). Previous research indicated that some women at risk were highly anxious, in need of psychological counseling, and non-adherent to screening behaviors for breast cancer. **Methods:** The purpose of this study is to address quality of life and adherence to screening issues associated with being at increased risk for breast cancer. The specific aims are to examine the impact of a psychoeducational intervention on: 1) the intermediate outcome variables of knowledge of breast cancer and risk factors, breast cancer beliefs, cancer attitudes, and coping skills in women at increased risk for breast cancer; and 2) the endpoint variables of quality of life and adherence to screening in women at increased risk for breast cancer. A third aim is to explore the mechanisms by which the psychological intervention may improve quality of life and increase adherence to breast cancer screening in women at increased risk for breast cancer. The research design uses a randomized controlled trial. The intervention components include social support enhancement, education, cognitive restructuring, and problem-solving. Women in the treatment arm attend sessions for 6 consecutive weeks, 6 months, and 1 year. **Respondent Characteristics:** One hundred seventy-two women agreed to participate in the study. Mean age was 42, with a range from 22 to 76, primarily white (91%), married (51%), less than a college education (23%), and employed full-time (60%). At baseline, 74% of women in both conditions overestimated their risk for developing breast cancer. **Results:** From our initial review of the demographics data ($N = 172$) there are no differences between those assigned to the experimental or control conditions on the following variables: age, marital status, racial/ethnic background, highest grade completed, employment status, occupation, religion, in-

come, number of children, or actual risk level. We have done some preliminary analyses looking at coping strategies, breast cancer anxiety, risk perception, and knowledge of breast cancer. We found that women in the treatment arm had significantly: 1) less breast-cancer specific anxiety at Time 2 ($P < 0.03$); 2) lower perception of risk at Time 2 ($P < 0.001$); and 3) greater knowledge of breast cancer at Time 2 ($P < 0.02$). **Conclusion:** Anecdotal reports from women in the experimental condition indicate that they have obtained a tremendous amount of knowledge and feel less anxious about carrying out early detection behaviors for breast cancer. The above findings suggest that the intervention helps to increase knowledge of breast cancer, decrease anxiety, and improve quality of life.

33. Composite Tissue Allotransplantation: Psychiatric Considerations in Hand or Arm Transplantation

M.M. Klapheke, MD

Objective: On the immediate horizon is composite tissue allotransplantation (CTA) to restore missing limbs and to reconstruct the faces of persons with devastating disfigurements. The technical expertise exists, yet questions will remain in individual cases as to whether the potential benefits outweigh the risks, for example, of life-long immunosuppression. Although there is extensive transplantation psychiatry literature, there are no publications on psychiatric aspects of CTA. The author details relevant psychosocial considerations to form the basis of psychiatric consultation in hand or arm transplantation. **Methods:** Technical issues in CTA, including information from the recent International Symposium on CTA, are reviewed. In an effort to find information relevant to psychiatric issues and evaluation of potential candidates for hand or arm CTA, a MEDLINE search was conducted utilizing terms of: hand, arm, trauma, amputation, transplantation, and psychology. Case examples seen by the author are reviewed for patients who have suffered upper-extremity trauma and for the first patients presenting for hand or arm pretransplantation evaluation including psychiatric consultation. **Results:** The author describes technical aspects and the process of proposed hand or arm transplantation, including indications, risks, benefits, and alternatives. Differences from other (non-CTA) forms of transplantation are presented, and issues involving the psychology of the hand and arm, issues of identity, and ethical considerations are reviewed. The specific role of the transplantation psychiatrist is defined and described in case examples. **Conclusions:** CTA is a new and different form of

transplantation and presents a number of specific opportunities and dilemmas for the transplantation team and patient. The transplantation psychiatrist has an important role in the pre- and post-CTA evaluation and management of patients.

34. The Goal of “Restraint-Free” Acute-Care Hospitals: Report From a University Hospital Multidisciplinary Action Team to Address the Use of Restraints

R.M. Lamdan, MD, FAPM; W. Vaught, PhD; B. O’Connor, PhD; P. Loughery, RN

Our hospital is a 350-bed acute-care facility that includes 100 beds in an adjacent psychiatric institute. Concerns about the use of physical restraints were raised during an accreditation visit by the Joint Commission on Accreditation of Health Care Organizations, which focused on the use of physical restraints in the general hospital. Our aging population is associated with an increased incidence of delirium and dementia in general-hospital admissions. These confused, agitated, and disoriented patients can be at high risk for self-harm during acute care. Growing awareness of this, a serious patient injury in the hospital, as well as new JCAHO standards that will affect all general hospitals, prompted an institutional review of our restraint policy to achieve optimal patient safety, well-being, and dignity. A multidisciplinary taskforce was formed through the hospital Medical Ethics Committee to formulate a policy and establish an educational program for medical and nursing staff. Members of the taskforce were led by the C–L psychiatrist and included medical ethicists, trauma and neurosurgeons, medical intensivists, a geriatric internist, and nursing staff from administration, acute-care units, and education. We were challenged with creating an environment that limited restraint to well-documented, clinically appropriate situations as well as exploring the availability of restraint-free products. Our focus was on assessment/prevention-of-falls risks and modification of behavior of head-injured, intoxicated, and psychiatrically ill patients. The use of restraints for invasive procedures, airway protection during emergence from anesthesia, or sedation for intubation, and issues of capacity and consent were also addressed. Research and literature review, as well as proposed policies, were presented. The multidisciplinary process of program development and institutional policy were also be addressed. Ethical concerns about inclusion of cognitively impaired patients in research protocols were reviewed.

35. Viral Encephalitis Precipitating Malignant Catatonia and Treatment with Electroconvulsive Therapy

L.M. Leard-Hansson, MD; K.L. Philbrick, MD, FAPM; P.C. Anagnos, MD; P. Simon, MD; T.A. Rummans, MD, FAPM

Catatonia is a syndromal cluster of signs and symptoms that spans medical and psychiatric illness, arising in the context of medical and neurologic insults to body and brain as well as psychoses and mood disorders. Catatonia may progress in severity from benign to malignant; the latter may be overlooked when it occurs in the medical setting, potentially denying life-saving treatment for these seriously ill patients. **Case Report:** A 31-year-old white woman with neither personal nor family psychiatric history presented with several days of headache, episodic fever, malaise, and progressive delirium. Imaging and laboratory studies were unremarkable apart from a lumbar puncture revealing a significantly elevated cerebrospinal fluid protein and pleiocytosis with predominant lymphocytes. Assuming a working diagnosis of viral encephalitis, the patient received intravenous acyclovir and prophylactic antimicrobials but became progressively agitated, negativistic on exam, and unwilling to eat or drink. Profound autonomic instability, characterized by dramatic excursions in blood pressure and heart rate, and hyperthermia in excess of 40° Celsius, preceded the development of stuporous unresponsiveness and desaturation requiring intubation, followed later by intense generalized rigidity. The previous behavioral dyscontrol had prompted a psychiatric consult; with the onset of profound rigidity in the context of autonomic instability and hyperpyrexia, the diagnosis of malignant catatonia was made. Electroconvulsive therapy (ECT) was initiated and the patient experienced progressive autonomic stabilization, defervescence, resolution of rigidity, and restoration of responsiveness. Malignant catatonia likely represents the “final common pathway” of severely deranged neurobiology (with prominent contributions from dopaminergic and GABAergic pathways) that can occur in either medical or psychiatric illness, both with and without the potentially aggravating factor of neuroleptics or other dopa-active medications. This case serves as a signal reminder that catatonia may occur in medical/surgical units, where consultation psychiatrists have a unique opportunity to contribute to the patient’s care. Current perspectives on the pathophysiology of malignant catatonia and its management are reviewed. Aggressive utilization of ECT may be life-saving for these patients, despite the

absence of “psychiatric history,” or other conventional indications for ECT. Benzodiazepines have a collateral, adjunctive role as may other dopa-active or muscle relaxant drugs. Improved recognition of malignant catatonia in the medical setting will not only strengthen the care of these patients but may also enable advances in the study, understanding, and treatment of catatonia occurring in the context of psychiatric illness and pharmacologic interventions.

36. Olanzapine in the Treatment of Delirium

P. Masand, MD, FAPM; A. Siphahimalani, MD

Delirium, an organic psychiatric syndrome occurring in 10% of hospitalized medical and surgical patients, is characterized by fluctuating levels of consciousness and global impairment of cognitive functioning. It can be caused by a variety of factors and usually has a sudden onset and fluctuating course. The Delirium Rating Scale (DRS) is a 10-item, clinician-rated symptom scale that is more sensitive than tests of cognitive function for delirium. Eleven delirious patients were treated with olanzapine (8.2 ± 3.4 mg. qhs), and 11 delirious control patients were treated with haloperidol (5.1 ± 3.5 mg. qhs). Peak response time was similar in both groups. Five of the 11 olanzapine patients showed significant improvement ($>50\%$ reduction) on the DRS, and no patients had side effects, whereas 6 of the 11 control subjects showed no improvement on the DRS, and 5 had EPS or excessive sedation. Olanzapine may be a useful alternative to haloperidol in the treatment of delirium in hospitalized patients.

37. A Randomized Controlled Trial of Early Psychological and Behavioral Intervention Following Myocardial Infarction

R.A. Mayou, FRCP, FRCPsych, FAPM

The psychological consequences of myocardial infarction for depression and anxiety, quality of life, use of services, and mortality are well known, but the efficacy of psychological treatments remains unclear. There have been two large negative trials of psychological interventions during convalescence, but there is some evidence that very early interventions have benefits. We aimed to evaluate a “case management” approach, delivered by specially trained and supervised cardiac nurses and suitable for routine care. It was based on cognitive-behavioral principles with individualized plans for patients and relatives. Each relevant secondary prevention and activity topic was discussed with the patient and agreed-upon conclusions summarized for all those involved in care. Appropriate written

information and tapes were provided. Patients were seen on up to four occasions during their hospital admission with telephone follow-up within the first 4 weeks. Outcome was assessed by a range of interview and self-report measures at 4 weeks and by self-report at 3 months. Consecutive admissions under the age of 70 with a confirmed diagnosis of myocardial infarction were randomized to usual treatment or the psychological intervention. One hundred seventeen subjects were recruited, and follow-up information was collected on all except the five who died. There were statistically significant benefits at both 1 month and 3 months in terms of depression and anxiety, return to everyday activities, satisfaction with progress, confidence about activity, and lifestyle change. The 1-month assessment identified “unmet” further treatment needs. These were heterogeneous, including problems of work, family, anxiety, and difficulties in lifestyle change. They were more numerous in the usual care group. **Conclusion:** Individualized early psychological intervention is helpful and cost-effective for patients with myocardial infarction, as assessed by a wide range of outcome measures. The hospital and 1-month assessments also provided a basis for determining longer term psychiatric and other rehabilitation and secondary prevention plans.

38. The Cancer Fatigue Scale: The Development and the Validation

T. Okuyama, MD; T. Akechi, MD; A. Kugaya, MD, PhD; T. Nakano, MD; I. Mikami, MD; H. Okamura, MD, PhD; Y. Uchitomi, MD, PhD

Background: Although fatigue is one of the most pervasive symptoms in cancer patients, there are few brief and valid scales assessing fatigue in cancer patients. The purpose of the present study is to develop and to validate a brief self-rating scale assessing fatigue in cancer patients. **Methods:** We developed a 15-item Cancer Fatigue Scale consisting of three subscales: physical fatigue, mental fatigue, and cognitive fatigue. Subjects were asked to complete the scale, and parts of the samples were completed along with the Visual Analogue Scale (VAS) of fatigue, and some other measures. **Results:** Data were obtained from 307 cancer patients. The Cancer Fatigue Scale had good stability (average test/reset reliability $r=0.69$, $P<0.001$) and good internal consistency (average Cronbach’s alpha coefficient of each subscale = 0.82). Convergent validity confirmed by correlation between the Cancer Fatigue Scale and the VAS of fatigue was shown to be good (average $r=0.49$, $P<0.001$). Construct validity confirmed

by factor analysis was also good. The average time required to complete the Cancer Fatigue Scale in 38 ambulatory advanced cancer outpatients was 132.9 ± 77.2 seconds (median = 111.5 seconds). **Conclusion:** The present study indicates that the Cancer Fatigue Scale is a brief and valid scale assessing fatigue in cancer patients.

39. Depressed Mood Is Associated With Increased Mortality: Findings in Cardiovascular Disease, Cancer, Liver, and Pulmonary Disease

D.S.P. Schubert, MD, PhD, FAPM; N.V. Dawson, MD; M.J. Roach, PhD; N. Wenger, MD; A.W. Wu, MD; J. Tsevat, MD; K. Covinsky, MD; N. Desbiens, MD

Roach et al. found an association between depressed mood and mortality rates in a mixed sample of severely ill hospitalized adults. These results held true after correcting for severity of medical illness, degree of physical disability (Activities of Daily Living), and demographic variables. With regard to individual organ-system disorders and cancer, several studies have found a depression–mortality association in cardiovascular disease, cancer, and cirrhosis, but other studies of cancer have not. This literature suggested the hypotheses that depressed mood will be associated with mortality rate in cardiovascular disease, cancer, cirrhosis, and pulmonary disease after controlling for disease severity, physical disability degree, and demographic variables. Subjects were 3,519 seriously ill adults from the multicentered SUPPORT study described in Roach et al. Each disease group was tested for the independent association of depressed mood with mortality after adjusting for severity of medical illness, functional status (Activities of Daily Living), age, number of comorbid medical illnesses, and sex. At 4½ years, three hypotheses were supported: Mortality was associated with depression in the cancer group ($n = 828$; $P = 0.0125$), congestive heart failure ($n = 852$, $P = 0.0149$), and cirrhosis ($n = 269$, $P = 0.0102$). But no significant relationship was found in acute respiratory failure ($n = 751$, $P = 0.37$), chronic obstructive lung disease ($n = 522$, $P = 0.0728$), or multiorgan system failure with sepsis ($n = 287$, $P = 0.7948$). Differences among disease groups to account for the results were suggested in the chronicity of diseases, in the mode of mortality increase by depression, in levels of immune function, and in rates of full-blown major depression as a psychiatric disease.

40. Post-Liver Transplant Survival of Patients with Pre-Transplant Substance Use Problems

S.L. Snyder, MD, FAPM; F. Zilberfein, PhD; C. Hutson, CSW; J. Lindbom, CSW; M. Drooker, MD; S. Zelniker, CSW; A. Gannon, CSW; C.M. Miller, MD

Introduction: The prediction of post-liver transplant outcome based on pretransplant substance use problems remains uncertain. **Method:** Initial psychosocial assessments of 286 patients who received a first liver transplant between 7/1/92 and 12/31/94 were examined for substance use problems, disorders, and associated difficulties. Survival as of 12/31/95 (1 to 3.5 years posttransplant) was compared for patients with and without these substance-related concerns. **Results:** No differences were found in survival for patients with history of substance use problems ($n = 83$), substance use disorders ($n = 67$), or intravenous drug use ($n = 26$) vs. others. For the 83 patients with history of substance use problems, no differences were found in survival for patients with history of substance use against medical advice ($n = 31$), current or past professional treatment for substance use problems ($n = 32$), or substance use problems in a biological relative ($n = 34$) vs. others. However, substance-use problem patients ($n = 28$), whose insight into substance use disorder was noted as a difficulty by the transplant psychosocial team at initial evaluation, had decreased survival (64.3% alive), vs. those in whom difficulty with insight was not noted ($n = 55$; 85.5% alive; $P = 0.027$). **Discussion:** Appropriately selected and treated patients with history of substance use problems and disorders have survival comparable to other post-liver transplant patients. Good posttransplant survival for substance-use problem patients may have been attributable to selection of favorable applicants, to active pre- and post-transplant interventions by the transplant team's social workers and psychiatrists, or to insufficient study duration for detecting survival effects. The mechanism by which problems with insight might be associated with decreased survival cannot be determined by the current data, but the finding of decreased survival in this subgroup suggests that further research might identify individuals at high risk for worse outcome after liver transplant.

41. Premenstrual Dysphoric Disorder (PMDD): A Treatment Algorithm

S.K. Stern, MD; J.J. Strain, MD, FAPM; H. Sacks, MD, PhD; R.G. Stern, MD; A.M. Cartagena, MA; J.M. Davis, MD; N. Chan, MD

Objectives: A treatment algorithm for premenstrual dysphoric disorder (PMDD) was developed on the

basis of a comprehensive analysis of placebo-controlled studies in PMDD. **Design and Methods:** A literature search was conducted to identify all relevant treatment trials. Four methodological considerations were applied when developing the algorithm arms: 1) at least three studies on a specific class of agents were conducted by unrelated investigators; 2) the trials consistently demonstrated superiority of the active agent (AA) over placebo; 3) if studies had contradictory results regarding the same AA, when possible, their data were pooled and meta-analyzed; and 4) many aspects pertaining to the treatment of PMDD with selective serotonin reuptake inhibitors (SSRIs) have not been studied. Some tentative answers have been extrapolated from treatment studies with SSRIs in depression. **Results and Conclusions:** Across controlled trials, there was a 30% placebo-response rate. Only a few branches of the algorithm could be derived from strictly evidence-based data. Currently, SSRIs emerge as the first line of treatment in PMDD. Future controlled studies need to address specific questions regarding the use of SSRIs in PMDD (e.g., length of continuous treatment, efficacy of intermittent treatment, long-term tolerability, and efficacy of SSRIs in PMDD, and so forth).

42. Information Needs and Decisional Preferences of Women with Breast Cancer Compared With Men With Prostate Cancer

D.E. Stewart, MD, FAPM; A.M. Cheung, MD, PhD; F. Wong, MD; M.P. McAndrews, PhD; T. Bunston, PhD; M. Meana, PhD; J. Dancey, MD

Cancer patients are increasingly interested in learning more about their disease. Are there gender, age, psychosocial, educational, site factors or delivery format preferences, in information needs and decision-making about cancer? One hundred men with prostate cancer (MPC) and 113 women with breast cancer (WBC) attending ambulatory oncology clinics completed a self-report questionnaire and Mental Health Inventory. WBC had a lower mean age and slightly higher educational level than MPC. There was a linear relationship between age and decisional autonomy, with younger patients preferring more. Patients who wanted to make their own decisions were less anxious. WBC preferred more information and a more active role in decision-making than MPC. MPC were much more interested in receiving information about whether they could infect other people with cancer than WBC. To control for age, only MPC and WBC patients between 50 and 70 years were analyzed. Information needs were similar, except that

MPC preferred physical information only, whereas WBC wanted additional psychological information about their condition. No differences were found in preferred delivery format. Overall decisional preferences strongly favored shared roles. A stepwise discriminant function analysis was conducted, and the most important predictors identified in decision-making were level of education, age, current cancer treatment, level of anxiety, and optimism about the future. Most patients had consistent preferences across illness trajectory. Cancer sites are of little importance in MPC and WBC, compared with other factors, in determining information needs and decisional preferences in cancer management.

43. Cultural Issues in the Consultation–Liaison Psychiatry Setting: The Variable “Hispanic”

A.M. Cartagena, MA; J.J. Strain, MD, FAPM; K. Kelliher, MA; J. Schmeidler, PhD

Introduction: The problem of the description of the patient’s culture in the C–L setting is especially confounded with regard to the term *Hispanic*, the commonly used demographic indicator. Hispanic refers to those persons from Latin America and who speak Spanish, but it has little relevance to biology (e.g., race, genetic predispositions, religion, or even customs) or native indigenous people. This computerized database study demonstrates the need to redefine the Hispanic descriptor commonly used to include religion, race, employment, and education as a “conglomerate” variable. Hispanic, as currently used, is not sufficient for a description of culture and remains an impediment to biomedical studies and biopsychosocial formulations. **Method:** All 4,999 inpatient psychiatric referrals from 1988 through December 1997 were evaluated and the findings recorded on the MICROCARES computerized database system by psychiatric consultants and reviewed by senior C–L attendings. Data were recorded in four domains: 1) demographics; 2) diagnoses: problems, five DSM-III-R axes, Karnofsky and Global Psychiatric Assessment (using the Missouri Mental Status Form); 3) interventions: psychosocial, drug, psychiatric hospitalization; and 4) hospital process variables (e.g., number of follow-ups, discharge location, amount of supervision, length of hospital stay). Stepwise logistic regression determined how sets of predictors could distinguish between Hispanics and non-Hispanics. **Results:** The 1,392 cases (28.31%) who were Hispanic were significantly different from the other ethnic groups (e.g., white, black, Asian, others; in being female ($P=0.005$), younger ($P=0.001$),

Catholic ($P=0.001$), not employed ($P=0.001$), less educated ($P=0.001$), a recipient of public aid ($P=0.001$); more often referred for antisocial behavior ($P=0.001$), child abuse ($P=0.02$), psychological contribution to diagnoses ($P=0.004$), drug problem ($P=0.001$), pain ($P=0.001$), history of psychotic processes ($P=0.021$), suicidal ideation ($P=0.001$); and, less often referred for assessment of capacity ($P=0.046$), organic mental disorder ($P=0.018$), or paranoid behavior ($P=0.009$); interventions: significantly more nonmedical consultations ($P=0.001$); obtaining information from others ($P=0.001$), expediting discharge from hospital ($P=0.017$); more aftercare referrals ($P=0.001$); less medication for depression ($P=0.008$); and fewer follow-up visits ($P=0.021$). Log logistic regression analyses are under way to develop predictors for assignment to the Hispanic cohort. **Conclusion:** The term "Hispanic", as currently used, is misleading and does not sufficiently describe the patient sample, because it is an "overarching" term based on language and location of origin, which are not sufficiently specific. It does not promote the use of the biopsychosocial model of Engel for evaluation, diagnosis, or treatment of medically ill patients. The demographic descriptor must be augmented with meaningful characteristics, for example, religion, race, etc., to be of any use in applying the biopsychosocial model and not providing misleading information on this diverse cohort.

44. Prediction of Suicidality and Characteristics of Those Referred for Suicidal Evaluation

J.J. Strain, MD, FAPM; A.M. Cartagena, MA; K. Kelliher, MA; J. Schmeidler, PhD

Introduction: The problem of the identification, evaluation, diagnosis, and treatment of suicidal general-hospital inpatients remains problematic in the acute-care, non-psychiatric setting. This study describes the characteristics, diagnosis, and treatment of suicidal patients among those referred for psychiatric consultation and how they compare with nonsuicidal consultation patients. **Method:** All 4,999 inpatient psychiatric referrals from 1988 through 1997 were evaluated and the findings recorded on the MICRO-CARES computerized database system by psychiatric consultants and reviewed by senior C-L attending physicians. Data were recorded in four domains: 1) demographics; 2) diagnoses: problems, five DSM-III-R axes, Karnofsky and Global Psychiatric Assessment (utilizing the Missouri Mental Status Form); 3) interventions: psychosocial, drug, psychiatric hospitalization; 4) hospital process variables,

(e.g., number of follow-ups, discharge location, amount of supervision, length of hospital stay). Stepwise logistic regression was used to determine how sets of predictors could distinguish between suicidal and nonsuicidal patients. **Results:** Of the 658 cases that were referred for suicidality (13.2%), 192 (29.2%) were not confirmed by the psychiatric consultant. Also, of those referred for other reasons, 91 (2.1%) were identified as suicidal by the consultant but not by the consultee. Patients identified as suicidal by the consultants differed in demographics from patients not identified as suicidal by either the consultant or the consultee, by being below age 45 ($P=0.001$), unemployed ($P=0.001$), not presently married ($P=0.001$), not black ($P=0.006$), unskilled ($P=0.018$), less educated ($P=0.001$), and living alone ($P=0.004$). Analyses of the other three domains (in Methods) are in progress. For example, inclusion of problems identified by the consultee improved distinction between the two patient groups. **Conclusion:** Distinguishing referred patients with suicidal problems will lead to the construction of an algorithm for screening general-hospital inpatients for suicidal risk. DSM-IV would be more complete if it had a provision for the coding of suicidal behavior so this important and potentially fatal symptom would be recorded and researched in the acute-care medical setting.

45. Predictive Characteristics of C-L Patients Diagnosed as Substance Abusers: Development of a Screening Tool at the Bedside

J.J. Strain, MD, FAPM; S. Gilman, MD; A.M. Cartagena, MA; K. Kelliher, MA; J. Schmeidler, PhD

Introduction: Our inability to differentiate the medically/surgically ill patients who have polysubstance abuse disorders (PSUD) near admission or in their inpatient acute hospitalization stage, has impeded early identification, evaluation, diagnosis, and establishment of referral for treatment. This report characterizes the demographic variables, reasons for referral, interventions, and hospital process variables for this important group of psychiatric disorders. It is the intent, from examining large C-L databases in multiple institutional settings, to understand the nature of this cohort sufficiently enough to develop an algorithm, based on significant odds ratios, that would reveal important early predictors. **Method:** All 4,999 inpatient psychiatric referrals from 1988 through December 1997 were evaluated, and the findings recorded on the MICRO-CARES computerized database system, by psychiatric consultants and reviewed by senior C-L attendings. Data were

recorded in four domains: 1) demographics; 2) diagnoses: problems, five DSM-III-R axes, Karnofsky and Global Psychiatric Assessment (utilizing the Missouri Mental Status Form); 3) interventions: psychosocial, drug, psychiatric hospitalization; 4) hospital process variables, e.g., number of follow-ups, discharge location, amount of supervision, length of hospital stay. Stepwise logistic regression was used to determine how sets of predictors could distinguish between substance abusing and non-substance abusing patients. **Results:** The 952 cases who were PSUD (19.2%) were significantly different from the non-substance-abuse patients in being male ($P=0.001$), younger ($P=0.001$), not employed ($P=0.001$), less educated ($P=0.001$); more likely to be Hispanic ($P=0.001$), black ($P=0.032$), on public assistance ($P=0.001$); more often referred for problems of alcohol ($P=0.001$), antisocial behavior ($P=0.001$), drug abuse ($P=0.001$), impaired relationships ($P=0.043$), request by patient himself for psychiatry ($P=0.001$), preoperative evaluation ($P=0.001$), suicidal thinking ($P=0.001$); and less often referred for anxiety/fear ($P=0.001$), behavioral management ($P=0.005$), coping ($P=0.001$), depression ($P=0.001$), problem with diagnoses ($P=0.001$), organicity ($P=0.001$), paranoid behavior ($P=0.001$), capacity ($P=0.010$), or evaluation of the terminally ill ($P=0.003$); interventions: significantly more: nonmedical consultations ($P=0.001$), changing hospital environment, (e.g., direct observation [$P=0.009$]), expediting discharge from hospital ($P=0.017$), more aftercare referrals ($P=0.001$); less: suggestion to expedite medical treatment ($P=0.001$), effort to obtain social support from family, friends ($P=0.002$); psychotropic medications: more anxiolytics ($P=0.001$); and fewer follow-up visits ($P=0.04$). Capacity for informed consent was less, and leaving against medical advice was more an issue with the PSUD cohort ($P=0.001$). Log logistic regression analyses are under way to develop predictors for assignment to the PSUD patient group. **Conclusion:** PSUD patients remain problematic in not being referred early during their acute medical/surgical hospitalizations for psychiatric evaluation and care, and the lack of effort to ensure that they have a sufficient aftercare plan, posited while still inpatients. It is interesting that more of the PSUD group requested a psychiatric consultation, perhaps from previous experience, and/or their thinking that more help in their detoxification would be forthcoming. Also, the psychiatric consultant had fewer follow-up visits, but this may have been related to shorter hospital stays. More PSUD patients were permitted to sign out of the hospital against medical advice. Several findings

suggest that both medical and psychiatric staff promote the rapid discharge of PSUD patients and that such patients are rarely admitted to psychiatric inpatient services connected with acute medical/surgical care facilities. Aftercare planning is limited, as is triage to appropriate treatment facilities, despite the identification of a major mental disorder, for example, PSUD.

46. PTSD in Young Adult Survivors of Childhood Cancer

M.L. Stuber, MD, FAPM; W. Hobbe, RN, MN; K. Meeske, RN, MN; K. Ruccione, RN, MPH; A.E. Kazak, PhD

Objective: Recent studies have found that childhood cancer survivors do not report a higher level of symptoms of posttraumatic stress disorder (PTSD) or anxiety than a comparison group of healthy children and adolescents. However, mothers and fathers of childhood cancer survivors report significantly more PTSD symptoms than comparison parents. It is not clear whether the absence of symptoms in survivors represents differences between adults and children or between cancer survivors and parents. **Method:** Fifty-one young adults (age 18 to 37) who were at least 2 years off treatment for childhood cancer were interviewed. Their responses were compared with those of 64 mothers of cancer survivors (previously studied as part of the study of Pediatric Cancer Survivors). **Results:** Twenty-two percent of the young adult survivors, vs. 10.9% of the mothers, met criteria for PTSD on the Structured Interview for the DSM-IV (SCID); 45% of the survivors and 37.5% of mothers met criteria for Acute Stress Disorder on the SCID. **Conclusion:** Pediatric cancer survivors do not appear to be protected from the development of symptoms of PTSD seen in their parents. Longitudinal studies will be required to corroborate these cross-sectional findings, but the symptoms appear related to age rather than role.

47. Intravenous Lorazepam and Haloperidol Use in Consultation-Liaison Psychiatry

R. Viswanathan, MD, DSc, FAPM; G. Fernandez, MD; A. Pascual, MD

Although there have been a few studies on the intravenous (IV) use of haloperidol and adjunctive lorazepam in C-L psychiatry, studies on the use of IV infusions of benzodiazepines, particularly lorazepam, as a stand-alone treatment, are wanting. Our ongoing prospective study at a public hospital and a university hospital aims to 1) identify indications for which IV infusions of loraze-

pam, haloperidol, or a combination of both are used; 2) investigate the efficacy and safety of such use; and 3) correlate psychiatric diagnoses, patient demographics, target symptoms, and choice of intervention. We present data collected from this ongoing study so far. A total of 13 patients out of 344 consultations (4%) received IV psychotropic medications over a 3-month period. Ten of the 13 patients (77%) received lorazepam, 2 received haloperidol (15%), and 1 received haloperidol and lorazepam (8%). Agitation was a target symptom in 12 of 13 patients (92%), suicidal risk in 3 of 13 (23%), escape risk in 4 of 13 (31%), hallucinations in 5 of 13 (39%), delusions in 3 of 13 (23%), and hostility in 13 of 13 (100%). Mean number of days on IV lorazepam was 3 days, and mean haloperidol was 2 days. Agitation severity (on a scale of 0=not present, 1=mild, 2=moderate, 3=severe) was reduced from a mean of 2.4 to 0.7, suicide risk from 2.3 to 0, escape risk from 2 to 0.8, hallucination from 2.2 to 0.4, delusions from 2 to 1, and hostility from 2.3 to 0.9. No side effects were noted for patients on IV haloperidol. One patient developed hypotension, two lethargy, and one hypoxia on IV lorazepam. The use of IV haloperidol, lorazepam, or a combination of both seems to be effective with proper precautions. IV lorazepam is more frequently used than IV haloperidol or a combination of both. Hostility and agitation seem to be the major indicators for using IV psychotropic medications.

48. Psychosocial Predictors of Depressive Symptomatology in Family Caregivers of Patients With Cancer

M.A. Weitzner, MD; S.C. McMillan, PhD; P.B. Jacobsen, PhD

Depressive symptoms were assessed in a group of cancer family caregivers (FCs) in a curative setting (HLMCC) ($N=172$). Patients had either breast (32%), lung (23%), or prostate (44%) cancers. The FCs completed several questionnaires, including the Beck Depression Inventory (BDI), the Caregiver Burden Scale (CBS), and Multidimensional Scale of Perceived Social Support (MSPSS), as well as a demographic profile. Patient medical information included stage of disease and performance status as measured by the Eastern Cooperative Oncology Group-Performance Status Rating (ECOG-PSR). Demographics of the FCs were as follows: 66% were women; mean age = 61.3 years; mean education = 13.7 years; and 82% were spouses. Demographics of the patients were as follows: 54% were men; mean age = 64.7 years; and mean

diagnosis-test interval = 23.7 months. Stage of disease was evenly distributed, and 52% of patients had ECOG-PSR = 0. Results showed that the mean BDI score for the FCs was 6.3 (range = 0–32). Of the total sample, 77% were asymptomatic, 20% had mild-to-moderate depressive symptoms, and 3% had severe depressive symptoms. Increased depressive symptoms in the FCs were associated with worse performance status ($P<0.01$). Increased depressive symptoms in the FCs were also associated with being a female caregiver ($P<0.01$), increased sense of burden ($P<0.0001$), and worse perceived social support ($P<0.0001$). Other FC demographic characteristics, such as age, employment status, marital status, and relationship to patient, were not significantly associated with increased depressive symptoms in the FCs. Hierarchical multiple-regression analyses were performed to explore whether burden and perceived social support were independent predictors of FC depressive symptoms. For depressive symptoms, perceived social support accounted for an additional 9% of variability above FC demographic and patient medical characteristics. Burden accounted for an additional 14% of variability above that accounted for by perceived social support. Thus, burden and perceived social support independently predict FC depressive symptoms. Further research is needed to determine whether other psychosocial variables are predictive of FC depressive symptoms.

49. Psychosocial Services Delivery Patterns in the Outpatient Cancer Center Setting

D.L. Wolcott, MD, FAPM; T.B. Strouse, MD, FAPM; C. Manetto, PhD

Although the field of psycho-oncology has made great advances in documenting the psychiatric epidemiology of cancer, there is currently only a modest body of information concerning delivery of integrated comprehensive Patient Support Services (PSS)—dietitian services, psychiatrist services, psychologist services, social worker services, and multidisciplinary cancer pain management services—in the outpatient cancer care setting. Salick Health Care, Inc. (SHCI) operates outpatient cancer centers in the community hospital and teaching hospital setting. SHCI provides multidisciplinary comprehensive Patient Support Services (PSS) and Cancer Pain Management Service (CPMS) programs and has developed a custom relational database program (PSIS) for administratively tracking all clinical PSS and CPMS services provided to individual cancer center patients. This presentation docu-

ments patterns of delivery of PSS and CPMS services during SHCI fiscal year 1997 (9/1/96–8/31/97) provided to patients at the Cedars-Sinai Comprehensive Cancer Center (CSCCC), a 24-hour ambulatory cancer treatment facility operated by SHCI as a component facility of the Cedars-Sinai Medical Center in Los Angeles. During FY 97, the CSCCC provided treatment to about 4,500 cancer patients, who made about 53,000 patient visits to the Center. The most common recorded patient diagnoses were gynecological cancers, breast cancer, prostate cancer, lung cancer, sarcomas, and GI cancers. The distribution of patient visits by service were medical oncology (40%), radiation oncology (35%), gyn-oncology (14%), and other (11%). The CSCCC PSS program provided services during FY 97 to 908 patients (20% of CSCCC FY 97 total patients served), provided 9,192 patient visits, and a total of 12,634 patient services. The average PSS patient received 13.9 services, requiring a total of 4.9 hours of PSS staff member services time during the fiscal year; 181 patients received CPMS services, including 2,576 patient visits and 3,429 patient visits. Data on patterns of patient service delivery categorized by primary Patient Support Services disciplines (e.g., psychiatry, social work), by primary PSS service (general PSS as compared with CPMS), and by medical service (radiation oncology vs. non-radiation oncology) are presented and interpreted. These data provide insight into the patterns of patient service delivery by an integrated comprehensive PSS and CPMS service in the ambulatory cancer center setting, and it relates to the costs of delivery of these services. This service delivery cost analysis can be helpful for efforts to market PSS and CPMS services to institutional leaders and third-party payers.

50. Is Depression a Major Risk Factor for CAD? What a Comparative Assessment Can Tell Us

L. R. Wulsin, MD

Most members of A.P.M. (the choir) may believe that depression contributes to the development or progression of coronary artery disease (CAD). But our medical colleagues (the congregation), including the American Heart Association, are not ready to view depression a risk factor. How strong is the evidence? Over 200 risk factors for CAD have been identified. Can depression compete? To examine the relative strength of the evidence for depression as a risk factor, we compared the evidence for depression to the evidence for smoking, hypertension, and obesity in seven areas: 1) strength of association; 2) specificity of association; 3) consistency of association; 4) co-

herence of association; 5) temporal relationship; 6) dose-response effect; and 7) biological plausibility. With respect to strength, specificity, consistency, and temporal relationship of the association, we found nine studies that prospectively examined the risk conferred by depression on the incidence of subsequent CAD. Three studies were negative, and among the six positive studies, the relative risks ranged from 1.5 to 4.5, similar to the range for smoking (1.3 to 2.0). The number of studies on smoking (>30) dwarfs the number on depression (9). The evidence on specificity is ambiguous: hopelessness, vital exhaustion, hostility, or negative emotion may be the noxious component of depression. The evidence is stronger for depression's contribution to the progression of CAD than to the incidence. To mount a more persuasive argument for (or against) depression as a risk factor for CAD, we need strength in numbers and more well-controlled, prospective community studies.

51. The Effect of Antihypertensive Treatment with Esmolol, Nicardipine, or a Combination of Esmolol and Nicardipine on Seizure Duration During Electroconvulsive Therapy

L.D. Young, MD, FAPM; C.J. Rainey, MD, JD; J.L. Atlee, MD; M.S. Dhamee, MD; T. Olund, MD; H. Harsch, MD, FAPM; D. Bresnahan, MD

This study compared seizure duration in patients undergoing electroconvulsive therapy (ECT) and general anesthesia with a blind random protocol comparing nicardipine (NIC), esmolol (ESM), and a combination of esmolol and nicardipine (COM) for modification of blood pressure and heart rate. **Background:** The modification of a blood pressure surge during ECT by beta blockade has been increasingly accepted in clinical practice. Calcium channel blockers such as NIC may have physiological advantages over beta blockers for the patient. The effects of calcium channel blockade on seizure duration has not been studied. **Methods:** Six patients (2 male and 4 female, age 36 to 75) who underwent ECT gave informed consent for the study. General anesthesia was administered with methohexital and succinyl choline. The ECT stimulus was given with a constant-current instrument (Thymatron), from which EEG was also recorded. Blood pressure, heart rate, and rhythm disturbance were separately recorded and reported elsewhere. In an effort to maintain the stimulus in the minimal effective range, the stimulus was decreased 10% after each completed seizure and advanced after missed seizures. ESM, NIC, and COM were given in a

randomized sequence to each patient. Seizure duration was measured by bifrontal EEG electrode placement (Thymatron) and by clinical observation of the cuffed lower limb. For this report, individual data were analyzed by the Kruskal-Wallis nonparametric test and the Fisher Behrens *d*-test. **Results:** A total of 60 ECT sessions were analyzed for six patients (range 5 to 15 sessions). Seizure duration ranged from 11 to 114 seconds by EEG monitoring. The outcome was clinically satisfactory across all ECT sessions: 41 were ≥ 30 sec.; 17 were between 20 and 29 sec.; and 2 less than 20 sec. Patient means (\pm SD) for clinical seizure grouped by ESM, NIC, and COM, respectively, were 20.1 ± 7.01 , 21.1 ± 4.18 , and 24.1 ± 7.98 ; and for EEG monitoring were 35.9 ± 7.56 , 33.8 ± 8.65 , and 40.2 ± 8.29 sec., respectively. **Conclusion:** These data support a conclusion that there are no significant differences between esmolol, ncardepine, and a combination of the two drugs as to the effect on seizure duration during ECT.

52. Competence to Provide Informed Consent in Patients Undergoing Bone Marrow Transplantation

T.S. Zaubler, MD; J.R. Fann, MD; S. Roth-Roemer, PhD; R. Pearlman, MD; M. Sullivan, MD, PhD; W.J. Katon, MD, FAPM; K. Beach, RN; K. Syrjala, PhD

Introduction: Impairments of competence to provide informed consent has been shown to be associated with severe medical illness. Cancer patients undergoing bone marrow transplantation may be particularly predisposed to impaired competency because they typically present with systemic disease and receive high-dose chemotherapy, often with total-body irradiation. However, there have been no studies examining the impact that bone marrow transplantation may have on competence. The present study describes the prevalence of impaired competence to provide informed consent, and the associations between impaired competence, mood states, delirium, and various medical risk factors in cancer patients undergoing bone marrow transplantation. **Methods:** Twenty patients admitted to the Fred Hutchinson Cancer Research Center for bone marrow transplantation were assessed at three different time-points during their treatment. At pretreatment, 30 days, and 90 days after bone marrow transplantation, patients were administered a semistructured interview (MacArthur Competency Assessment Tool [MacCAT]) to assess their competence to provide informed consent. The MacCAT measures four different standards for competency with separate scores for each of these standards. The standards

are a patient's ability to express a choice about treatment, the ability to understand information about treatment, the ability to think rationally about treatment, and the ability to appreciate the impact that treatment may have on oneself. Delirium was assessed with the Delirium Rating Scale; mood states were evaluated with the Profile of Mood States-Short Form and Symptoms Checklist-90-R, and various medical risk factors for impaired competency were recorded at these same three time-points. **Results:** A preliminary analysis reveals no evidence of impaired competency and little variance in the mean scores on the MacCAT for each of the four competency standards at all three time-points for all 20 patients. Paired-sample *t*-tests revealed no statistically significant differences between pretreatment, 30-day, and 80-day scores on any of the standards measured, with patients scoring near-perfect scores on all of these measures. There was no evidence of significant delirium or affective disturbances during these time-points either. **Conclusion:** In this preliminary study, patients undergoing bone marrow transplantation as treatment for cancer, despite receiving high-dose chemotherapy, and, in some cases, total-body irradiation, did not have significant impairments in competency to provide informed consent during the acute phase of the treatment. Given these findings, it is important that clinicians provide informed consent not only when bone marrow treatment is initiated, but also for interventions needed throughout the course of treatment and that they continually respect patients' competent choices about their treatment.

53. Fenfluramine Challenge Test Predicts Response to Pharmacological Treatment of Medically Unexplained Gastrointestinal Pain

L. Tanum, MD; K. Bråtveit-Johansen, MD; U.F. Malt, MD, PhD, FAPM

Purpose: To investigate whether response to the fenfluramine challenge test (FCT) predicts response to mianserin in nonpsychiatric patients with medically unexplained gastrointestinal pain. **Methods:** Forty-seven patients without psychiatric disorder (SCID) were given 60 mg. fenfluramine orally in the morning. Serum cortisol (COR) and prolactin (PRL) were analyzed at baseline and after 120, 180, and 240 minutes. Patients were then randomized into a 7-week double-blind treatment with mianserin, a combined 5HT_{2&3} and α_2 antagonist, or placebo. Response was assessed by visual target symptom ratings (patients) and clinical global evaluation of improvement (doctor). **Results:** Substantial relief of pain and primary

target symptoms in response to mianserin treatment were closely linked to positive fenfluramine response, in contrast to nonresponders, where a blunt or negative result was observed. Best prediction was obtained by pooling the COR and the PRL response profile (95% reduction in target

symptom ratings: positive predictive power 86%). Gender did not significantly influence the results. **Conclusion:** The fenfluramine challenge test may be a useful tool to identify subjects who may respond to psychopharmacological treatment of medically unexplained gastrointestinal pain.

Concurrent Paper Sessions

Session A: Psychiatric Care and Quality of Life in Cancer and AIDS

The Longitudinal Course of Depression in HIV-Infected Women

R. J. Boland, MD; J. Moore, PhD; P. Schuman, MD

Objective: The longitudinal course and outcome of depression was followed in a large sample of HIV-infected (HIV+) women. **Method:** Data were collected from 871 HIV+ and 439 HIV-uninfected (HIV-) adult women in a prospective study (HIV Epidemiological Research Study) conducted in four cities (Baltimore, Detroit, New York, and Providence). Subjects were recruited between 4/93 and 1/95. Women were matched for age and HIV risk behavior. All women received a baseline interview, which included assessments of demographic, medical, substance abuse, and psychosocial parameters. Depression was measured by use of the Center for Epidemiological Studies Depression Scale (CES-D). Follow-up interviews were administered every 6 months after the baseline interview. **Results:** In the HIV+ group, depression tended to increase over time. Several factors had a significant positive effect on depression scores, including HIV status, the presence of multiple life stressors, and injection substance use. The presence of certain HIV-related symptoms had a positive effect on depression scores. CD4 count had a negligible effect on depression scores. **Conclusions:** Chronic depression appears to be the rule for a large segment of this population. An earlier analysis demonstrated the high rate of depression in our group at baseline, both in HIV+ and HIV- subjects. At baseline, only life stressors and ongoing substance use related to depression; HIV status did not. With time, these factors still play an important role, but HIV+ status—particularly symptomatic HIV—is having a more important effect on psychological function. Implications for evaluation and treatment of this population will be discussed.

Immunological Status vs. Depression as Predictors of Quality of Life in HIV-Infected Individuals

J. R. Maldonado, MD, FAPM; C. Koopman, PhD; C. Gore-Felton, PhD; S. Diamond, LCSW; A. Chapman, MD; D. Spiegel, MD

Objective: This study examined the relationships between depression and CD4 cell count with quality of

life (QOL) among HIV+ patients. **Design:** A cross-sectional research design was used to examine relationships among two independent variables, depression and CD4 cell count, with the dependent variable of QOL. **Method:** One hundred three HIV+ subjects, 73 men and 30 women, were recruited into a randomized clinical trial on the effects of group psychotherapy on health risk behavior and QOL. The subjects' mean age was 40 years; 47% were low-income; 63% white; 25% African American; and 12% other ethnicity. Half the subjects had been diagnosed with AIDS. Measures included the Center for Epidemiological Studies-Depression Scale (CES-D), current CD4 cell counts, and the Medical Outcomes Study-HIV (MOS-HIV). **Results:** In the multiple-regression analysis, depression was found to be significantly related to perceived poor health ($\beta = 0.44$; adjusted $R^2 = 0.180$; $P < 0.0001$), pain experienced ($\beta = 0.35$; adjusted $R^2 = 0.106$; $P < 0.001$), pain interference with duties ($\beta = 0.39$; adjusted $R^2 = 0.133$; $P < 0.0001$), difficulty in reasoning and problem-solving ($\beta = 0.49$; adjusted $R^2 = 0.227$; $P < 0.0001$), forgetfulness ($\beta = 0.40$; adjusted $R^2 = 0.144$; $P < 0.0001$), difficulty in sustaining attention ($\beta = 0.52$; adjusted $R^2 = 0.272$; $P < 0.0001$), difficulty in concentrating and thinking ($\beta = 0.48$; adjusted $R^2 = 0.274$; $P < 0.0001$), poor health ($\beta = 0.50$; adjusted $R^2 = 0.238$; $P < 0.0001$), and health limiting social activities ($\beta = 0.45$; adjusted $R^2 = 0.216$; $P < 0.0001$). In contrast, CD4 cell count was significantly related only to health limiting social activities ($\beta = 0.23$; adjusted $R^2 = 0.240$; $P < 0.014$). **Conclusions:** Depression, more than CD4 cell count, is related to most indices of quality of life among HIV+ adults. Thus, in HIV+ persons, a subject's experience of depressive symptoms is a better predictor of poor quality of life than a low CD4 cell count. These results suggest that depression adversely affects QOL and that effective treatment of depression may dramatically improve the QOL of HIV+ persons.

Psychostimulants for Fatigue in the HIV+ Patient: Preliminary Findings of a Placebo-Controlled Trial of Methylphenidate vs. Pemoline

W.S. Breitbart, MD, FAPM; B. Rosenfeld, PhD; M. Kaim, PhD; J. Funesti-Esch, RN

Background: Fatigue is a highly prevalent and distressing symptom of HIV disease that has significant im-

impact on quality of life for patients with HIV/AIDS. Although anecdotal evidence has suggested that pharmacological interventions are beneficial for fatigue, little empirical research has supported these claims in patients with HIV/AIDS. In this study, we compared the efficacy of two psychostimulant drugs, methylphenidate (Ritalin) and pemoline (Cylert), for the treatment of fatigue in ambulatory patients with HIV/AIDS. Specifically, we assessed the impact of these medications on both subjective and objective measures of fatigue, as well as psychological distress and quality of life (QOL), while monitoring the frequency and severity of side effects. **Method:** In a double-blind, randomized, placebo-controlled method, patients were randomized to one of three treatment arms: methylphenidate, pemoline, or placebo. All participants completed a battery of objective and self-report measures, including: the Piper Fatigue Scale (PFS), the Visual Analogue Scale for Fatigue Severity (VAS-F), Timed Isometric Unilateral Leg Raising (TIULR), Structured Clinical Interview for DSM-IV (SCID), the Beck Depression Inventory (BDI), and the Brief Symptom Inventory (BSI). Sociodemographic and medical data were also collected, including CD4 cell count, viral load, hemoglobin, and hematocrit. **Sample Characteristics:** The demographic characteristics of the 109 patients who completed the study were the following: gender—38.5% female, 61.5% male; race—54.1% African American, 23.9% Hispanic, 18.3% white, and 3.7% other; HIV risk factor—40.4% heterosexual contact, 22% homosexual contact, 32.1% IVDU, and 5.5% other. **Results:** Subjects were evenly distributed between the three treatment groups: methylphenidate, $n = 37$; pemoline, $n = 31$; placebo, $n = 38$. Preliminary results show a greater reduction in fatigue (improvement scores: methylphenidate = 4.3, pemoline = 3.7, and placebo = 3.1; $P < 0.03$), as measured by the PFS, in the two groups on active medication compared with the placebo group. Furthermore, there was a stronger effect in the methylphenidate group than in the pemoline group. Reduction in fatigue, as measured by the VAS-F, was also associated with reductions in depression, as measured by the BDI, and psychological distress, as measured by the BSI ($P < 0.05$). **Conclusion:** Psychostimulants (both methylphenidate and pemoline) are effective for the treatment of fatigue in HIV. Improvement in fatigue was associated with reductions in depression and psychological distress. Further analysis will be conducted to determine the relative frequency/severity of side effects and the subsequent impact on QOL.

The Cooperative Clinical Trials Groups as a Unique Site for Psychosocial/QOL Research: The Cancer & Leukemia Group B (CALGB) 20-Year Experience

Jimmie C. Holland, MD, FAPM

The CALGB has collected psychosocial and quality of life (QOL) information for over 20 years within a multicenter cooperative oncology group. The Psycho-Oncology Committee developed a centralized telephone data collection using a trained interviewer, which has reduced missing data and improved quality of data, with reduced burden on patients and staff. Selected studies will demonstrate 1) the value of QOL outcome in determining efficiency in Phase III trials; 2) the use of Patient Registry follow-up for study of long survivors' quality of life and well-being; and 3) the use of the trials groups to evaluate the impact of psychological factors on survival in a setting in which medical variables are controlled.

Resilience of Will to Live in Terminally Ill Patients

H. M. Chochinov, MD, FRCP(C), PhD, FAPM; D.

Tataryn, PhD; D. Dudgeon, MD, FRCP(C); J. Clinch, MA

Few studies have addressed the extent to which dying patients maintain their will to live, even in the face of impending death. In an attempt to address this apparent gap in the literature, this study prospectively examined the construct of "will to live" in a large cohort of end-stage hospitalized cancer patients receiving palliative care. A group of 168 hospitalized terminal cancer patients had their will to live (WTL) measured with a self-report, 100-mm WTL visual analog scale (VAS). This VAS was incorporated into a multidimensional palliative care instrument known as the ESAS (Edmonton Symptom Assessment System), which comprises a series of visual analog scales measuring pain, nausea, shortness of breath, appetite, drowsiness, depression, sense of well-being, anxiety, and activity. To evaluate the resilience of the will to live, each patient's initial (within 2–3 days of admission to a palliative care unit) and final (median of 1 day to time of death) WTL scores were compared (using McNemar's paired chi-square test). Four percent vs. 9% of patients endorsed WTL at its lowest level (the upper decile of the 100-mm WTL VAS); comparing initial and final responses, respectively, 61% vs. 55% of patients endorsed will to live at the highest level possible (the lower decile of the 100-mm WTL VAS). These findings suggest that there is some waning of "will to live" among dying patients as death approaches. Perhaps even more striking is that the majority of patients maintain their

will to live, even up until the time of death, This would suggest that the will to live remains resilient, even in the face of death itself.

Liaison Psychiatry in Oncology: Teaching the Doctor–Patient Relationship to Faculty and Fellows

W. F. Baile, MD; E. Beale, MD; G. Glober, MD; R. Lenzi, MD; A. Kudelka, MD; R.C. Bast, Jr., MD

Physicians caring for cancer patients often disclose negative information, such as the cancer diagnosis and prognosis, as well as disease recurrence, treatment failure, and futility of further curative treatment. These inherently stressful interactions can result in only partial truth disclosure or the use of defenses, such as giving false hope or premature reassurance. However, only a few institutions have developed courses to teach the necessary communication skills to deliver bad news and respond to the patient's and family's emotional reactions. We review the literature and describe a model for teaching breaking bad news that is based on our experience in conducting workshops for over 100 faculty and fellows at our hospital. It consists of four principles: 1) a "learner-centered" approach (participants provide the case material); 2) the use of role-play; 3) small group sessions; and 4) the use of facilitators to ensure a constructive learning environment and smooth group process. We will describe administrative issues involved with the recruitment of participants and the structure of workshops conducted on the above and related themes. We will discuss a didactic curriculum and the process of working in small groups with oncologists. We will report examples of problem cases that are brought up as well as our experience in measuring outcomes, both with participant ratings of improvement and satisfaction and also use videotape assessment. Finally, we will discuss the collaboration between psychiatrists and oncologists as group facilitators and the issue of faculty development of skills in this area.

Session B: Psychiatric Aspects of CAD, Its Technological Treatment, and Delirium

Characteristics of Consecutive Patients Presenting to a Cardiac Clinic with Palpitations and an RCT of Psychological Treatment

R.A. Mayou, FRCP, FRCPsych, FAPM

Palpitations are a very frequent complaint in all medical settings and a common reason for referral to cardiol-

ogy. Most are not due to medically significant arrhythmias. Those referred for 24-hour ECG recordings are frequently abnormally aware of heart rate, are likely to suffer from psychiatric disorder, and generally show little improvement at follow-up. Little is known about consecutive attenders or the association of psychosocial characteristics with cardiac diagnosis. Treatment is regarded as difficult. **Methods:** We studied 190 consecutive referrals from primary care to a cardiac clinic. Patients underwent a research assessment 2–3 weeks before seeing the cardiologist and completed standard psychological and quality-of-life questionnaires, were interviewed and tested for awareness of heart rate. Eleven patients had chronic organic heart disease in addition to palpitations; 61 had medically diagnosed arrhythmias; 76 were abnormally aware of extrasystoles within normal range; and 40 appeared to be abnormally aware of sinus rhythm. All patients described concern about their symptoms and most reported substantial limitation of everyday activities. The majority were of long duration. **Results:** Patients with arrhythmias were the least distressed and disabled subgroup but were much more likely to be aware of their resting heart rate as compared with other groups. Patients who were aware of sinus rhythm were most likely to suffer from panic attacks and psychiatric disorder, be fearful of their symptoms and their implications, and be limited in everyday activities. There was some improvement in symptoms, distress, and disability at 3 months in all three groups. **Treatment Trial:** Patients with benign palpitations were recruited by the cardiologists for a randomized controlled trial of an individualized cardiac nurse-delivered intervention based on cognitive-behavioral principles of between one and five sessions. The treated patients had a significantly better outcome at 3 and 9 months in terms of frequency of palpitations, concern about their physical symptoms, mental state, and limitation of everyday activities. A minority of treated patients did not improve; most had major psychiatric or social problems that might have benefited from intensive specialist treatment. **Conclusion:** The majority of patients presenting with palpitations are significantly distressed and disabled, but only one-quarter have significant arrhythmias. Psychosocial factors, including overt psychiatric disorder, appear to be important in determining presentation and disablement. A simple nurse-delivered educational and psychological intervention was effective.

Broken Hearts: Ischemic Heart Disease, Depression, and Gender

D.E. Stewart, MD, FRCP(C), FAPM; S.E. Abbey, MD, FRCP(C); M.J. Irvine, PhD; Z. M. Shnek, PhD; P. Daly, MD; S. Bisailon, RN, MSc

Women are much more likely than men to die after their first myocardial infarction, to be underdiagnosed and undertreated, and have a poorer quality of life. This study examined over 250 men and women admitted to a Canadian intensive coronary care unit (CICU) with myocardial infarction or unstable angina who completed a self-report questionnaire on demographics, symptoms, risk factors, and depression (BDI). Forty percent of the patients were women. The average age was 62.7 ± 10.38 years, with no gender age difference. Women reported significantly more symptoms than men in the month before and at the time of, CICU admission, including shortness of breath, fatigue, numbness or tingling, sweating, nausea, "battery losing power," lightheadedness, chest pain into neck and jaw, faintness, and left arm pain without chest pain ($P=0.05$). At the acute event, over 42% of patients of both sexes waited over 3 hours before seeking medical care. Women were more likely than men to have their symptoms occur without physical or emotional stress ($P=0.02$) and to score in the depressed range on BDI (51.8% vs. 40.7%) ($P=0.05$). Nine of 10 patients who died scored high on BDI. Because heart disease is the leading cause of death in North American women, it is vital that we identify the early symptoms and comorbid conditions, such as depression, which may affect outcomes. Better education of women and their doctors is required to improve diagnosis and prognosis in coronary artery disease.

Psychosocial Effects of Enhanced External Counter Pulsation: A Technology to Counter Mood Disturbance in the Angina Patient?

S.L. Springer, MD; G.L. Fricchione, MD, FAPM; J.C.K. Hui, PhD; L. Jandorf, MA; A. Fife, MD; L. Burger; W. Lawson, MD; P.F. Cohn, MD

Background: Enhanced External Counterpulsation (EECP) is a noninvasive technology used to treat patients with refractory angina. It has been shown to be effective in lowering symptoms while improving myocardial ischemia as indicated on radionuclide imagery and exercise tolerance tests. In this study, patients were given a battery of psychosocial tests before and after a standard course of EECP, with the hypothesis that EECP has psychosocial effects, both primary and secondary, with potentially impor-

tant concomitant benefits for health and quality of life. Specifically, the ability of EECP to lower depression is of interest because depression is an independent risk factor for cardiac mortality and morbidity in patients with coronary artery disease and myocardial infarction. **Method:** EECP technology consists of a pantaloon device on calves, thighs, and buttocks, which rhythmically pulsates sequentially, distal to proximal, during diastole. The device has been shown to increase preload, lower afterload, and provide diastolic arterial augmentation, which serves to augment blood flow in the coronary vasculature. Twenty-eight male patients with angina refractory to medical and surgical treatment were enrolled in the EECP protocol and given a psychosocial battery of tests 1 day before initiation of treatment and on the last day of treatment. Twenty-seven patients completed the protocol. Seventeen patients were shown to have resolution of reversible myocardial ischemia by radionuclide scan after EECP; 10 patients had unchanged scans. Patients' pre- and post-EECP self-assessments of angina, psychological state, and quality of life were compared by paired *t*-test for significance. **Results:** Presented as difference of means for total ($N=27$): ischemia improved; $n=17$; unchanged, $n=10$. Only significant differences ($P<0.05$) are shown. Positive Difference of Means represents amelioration of the index.

	Difference of Means	P (Paired <i>t</i> -test)
General Health Quality	4.33 (5.17, 2.99)	0.0008 (0.0057, 0.0694)
Speilberger State Anxiety Index	1.95 (0.43, 4.63)	0.0276 (0.5600, 0.0196)
Speilberger Trait Anxiety Index	0.50 (-0.29, 1.88)	0.4552 (0.7571, 0.0307)
Beck Depression Index (BDI)	3.50 (3.11, 4.10)	0.0003 (0.0066, 0.0212)
Symptom Checklist-90:		
General Symptom Index	0.14 (0.13, 0.15)	0.0006 (0.0113, 0.0304)
Positive Symptom Index	5.57 (5.68, 5.42)	0.0026 (0.0094, 0.1123)
Positive Symptom Distress Index	0.10 (0.15, 0.02)	0.2031 (0.0443, 0.8920)
Somatization Subscale	0.29 (0.35, 0.19)	0.0053 (0.0364, 0.0407)
Obsessive Subscale	0.12 (-0.03, 0.32)	0.1266 (0.6742, 0.0480)
Depression Subscale	0.18 (0.19, 0.15)	0.0011 (0.0020, 0.1281)
Phobia Subscale	0.10 (0.13, 0.05)	0.0310 (0.0760, 0.1950)
Paranoia Subscale	0.06 (0.00, 0.15)	0.1890 (1.0000, 0.0092)
Psychosis Subscale	0.16 (0.24, 0.07)	0.0232 (0.0326, 0.4379)

Conclusions: Patients experienced amelioration of mood disturbances as an effect of EECP. Depression, as measured by BDI, was alleviated even in those who had no objective

evidence of a physiologic improvement in ischemia (unchanged, $P < 0.0212$).

Intravenous (IV) Haloperidol and Torsades de Pointes (TDP): A Retrospective Study of Agitated, Intra-aortic Balloon Pump (IABP)-Treated Patients Receiving High-Dose Haloperidol

N.M. Hunt, MD; T. A. Stern, MD, FAPM; S.V. Fischel, MD, PhD; K.M. Sanders, MD, FAPM

Objective: Given recent questions about the relationship between IV haloperidol and TDP, we sought to establish the strength of this relationship among critically ill patients predisposed to ventricular tachycardia (VT). **Patients and Methods:** We retrospectively reviewed the records of 198 consecutive IABP-treated patients. Of these, 42 (21%) received >33 mg/day of IV haloperidol. A subset (37; 19%) of the patients that received no haloperidol acted as our control group. Clinical, laboratory, and diagnostic data were collected. QTc values were computer-generated. **Results:** Two cases of TDP were documented in those receiving high-dose haloperidol (33–450 mg/day, mean = 135 mg/day). One of those cases occurred before haloperidol treatment; the other occurred after high-dose treatment. No cases were detected in the control group. There was not a significant difference in incidence of TDP between haloperidol and control groups. Twelve episodes of VT and two episodes of ventricular fibrillation (VF) were documented in the haloperidol-treated group while on the IABP, as compared with 11 episodes of VT in the control group. Serum levels of magnesium, potassium, calcium, and albumin were similar for the two groups. The use of IV haloperidol was largely circumscribed to the time patients spent on the IABP. Comparison of QTc before and during both IABP and haloperidol treatments demonstrated QTc prolongation in the high-dose haloperidol group (prehaloperidol mean QTc = 436 msec.; high-dose haloperidol mean QTc = 459 msec., $P = 0.019$). When cases with concomitant administration of type Ia antiarrhythmics were factored out, the QTc values were high but not significantly different (442 msec. and 461 msec., respectively; $P = 0.178$). **Conclusions:** Despite an apparent relationship between high-dose IV haloperidol and QTc prolongation in several cases, we were unable to establish a strong relationship for our cohort. The patient who experienced TDP before receiving haloperidol had no further episodes of TDP in the setting of high-dose treatment. Our impression is that this medically compromised cohort tolerated high-dose haloperidol without prominent adverse effects.

Specific risk factors for haloperidol-related TDP were not apparent from this study. Caution is warranted when using IV haloperidol, and attention to known risk factors is appropriate.

The Delirium Rating Scale-R-98 (DRS-R-98): A Revision of the Delirium Rating Scale (DRS)

P.T. Trzepacz, MD, FAPM

The DRS is a widely used 10-item rating scale for delirium that has been translated into at least six other languages. It has high interrater reliability and construct validity. DRS items have been used for phenomenological studies of delirium, including outcome, symptom clusters, and subtypes. However, through its use in research settings, deficiencies have come to light. The DRS-R-98 is a substantially revised version of the DRS that will more easily allow phenomenological and treatment research. It separates symptom-severity items from optional diagnostic items. The severity scale includes many new items: hypoactivity, hyperactivity, language difficulties, thought disorder, four different cognitive functions, revisions of delusions, and perceptual and sleep disturbance items. A score sheet includes optional ratings for phenomenological details of symptoms. The severity scale is intended for repeated measurements, although the inclusion of separately rated diagnostic items assists in initial evaluations and captures distinctive phenomenological features of delirium. The purpose, strategy, and application of the DRS-R-98 will be discussed, along with pilot data on interrater reliability and validity.

The Baseline Predictors and Six-Month Outcomes of Incident Delirium in Nursing Home Residents: A Study Using the Minimum Data Set

K.M. Murphy, PhD

Although delirium is recognized as a common problem in hospitalized geriatric patients, it has not been well researched in the nursing home setting. This paper presents results of a prospective study using secondary analyses of computerized Minimum Data Set (MDS) Version 2.0 data on 748 residents (mean age 87.8 ± 6.5) of one facility over a 12-month period to: 1) evaluate the 6-month incidence and baseline predictors of new-onset delirium; 2) determine the effects of incident delirium on functioning, clinical morbidity, mortality, and service use by 6-month follow-up; and 3) identify factors related to subsequent resolution of delirium symptoms. Residents with coma, and those meeting study criteria for baseline (prevalent)

delirium, were excluded from the study. Over the next 6 months, 126 residents (16.8%) developed incident delirium. Baseline risk factors that were statistically significant ($P < 0.05$) in the final multivariate logistic-regression model included advanced age, male gender, level of cognitive impairment, depression symptomatology, recent decline in function in activities of daily living (ADLs), and low body mass index ($\leq 21 \text{ kg/m}^2$). Incident delirium was also associated with significant ($P < 0.05$) multivariate-adjusted coterminous declines in cognition, mood, problem behaviors (i.e., wandering, verbally abusive behavior, physically abusive behavior, socially inappropriate behavior, resisting care), urinary continence, and ADL function, as well as new pressure ulcers, falls, and initiation of physical restraints. Significant ($P < 0.05$) multivariate-adjusted 6-month outcomes after incident delirium included behavioral decline, initiation of physical restraints, greater risk of hospitalization, and increased mortality. Only 26 residents (20.6%) who developed incident delirium achieved full resolution of symptoms over the next 6 months. Multivariate predictors of improvement included better cognitive functioning at baseline and less depression symptomatology at the time of incident delirium. These findings suggest that delirium is common among nursing home residents and is associated with high morbidity, mortality, and poor symptom resolution among survivors. However, there is also evidence of potentially addressable baseline conditions for minimizing the risk of new-onset delirium and its tragic consequences. This study also demonstrates the feasibility of detecting and monitoring acute changes in mental functioning and examining longitudinal outcomes of care with MDS Version 2.0. This instrument is the screening component of the Resident Assessment Instrument (RAI), a comprehensive, standardized, multidimensional assessment instrument currently used in 17,000 nursing homes in the Medicare/Medicaid programs as a basis for care planning and quality monitoring.

Session C: Collaborative Psychiatric Care for Primary Care Patients

How to Measure Medical Comorbidity in C-L Research

J. Unützer, MD; W.J. Katon, MD, FAPM; M. Sullivan, MD, PhD; E.A. Walker, MD

The severity of comorbid medical illness is an important factor that should be considered by clinicians and

mental health services researchers, and in particular researchers in consultation-liaison psychiatry who work at the interface of psychiatric and medical illness. We will systematically review the reliability, validity, and feasibility of commonly used measures of medical comorbidity, including the Chronic Disease Score (CDS), the Cumulative Illness Rating Scale (CIRS), the Duke Severity of Illness Index (DUSOI), the DUMIX, the Charlson Comorbidity Index, Ambulatory Care Groups, and a number of others. The applications for such scales in C-L research include adjustment for case-mix differences in observational studies (i.e., studies of psychiatric illness and health-care utilization, quality of care, or mortality) and research on treatment outcomes (i.e., adjusting for differences in medical comorbidity in treatment trials). Such measures are also important in research that tries to understand the relative importance and interactions of medical and psychiatric illnesses. A common limitation of many of these instruments is the fact that they are influenced by patients' physical symptoms, psychological distress, and illness behavior, which is correlated with psychiatric illness, although some measures appear to be more "objective" than others. The choice of the best instruments depends on factors such as the population studied, the research question, the availability of clinician raters, automated diagnostic or pharmacy data, and computing and financial resources. We will conclude with an algorithm that will help researchers select the most appropriate instruments.

Psychiatrists' Treatment of Depression in Medically Ill Patients

S.A. Epstein, MD, FAPM; J.J. Gonzales, MD; B. Boekeloo, PhD; N. Yuan; L. Cai; G. Chase, PhD

Purpose: This study was designed to assess practice patterns and appropriateness of care by psychiatrists when they treat depression in medically ill patients. **Method:** Four case vignettes of a woman with recurrent major depression were used in this survey study. The vignettes varied only by increasing medical illness severity: Case #1 was healthy; Case #2 had mild arthritis; Case #3 had early-stage breast cancer and severe arthritis; and Case #4 had metastatic breast cancer. Each psychiatrist responded to a background information questionnaire and answered diagnosis and treatment questions for one of the four cases. Case responses were compared with those of an expert consensus panel of four Consultation-Liaison psychiatrists with expertise in the treatment of depression in medically ill patients. **Results:** Completing the survey were 279 ran-

domly selected psychiatrists from across the United States (response rate = 53%). Increasing medical illness severity was accompanied by increasing recognition of the diagnoses of Substance-Induced Mood Disorder and Mood Disorder Due to a General Medical Condition. There were no differences by case in antidepressant prescribing (recommended by 68% of all physicians) and psychotherapy (93%). However, there were marked variations in test ordering across the four cases, for example, brain imaging was recommended by 30% of psychiatrists for Case #3 and 71% of psychiatrists for Case #4. Across all cases, agreement with the expert panel varied widely by decision category, for example, agreement was approximately 90% with the recommendation for psychotherapy, 60% with recommendations regarding whether nonpsychiatric medications should be adjusted, and 60% with recommendations for lab tests or imaging. Decisions also varied widely from case to case, for example, agreement with the experts' diagnoses was 77% for Case #3 but 28% for Case #4. Practice characteristics that were predictive of agreement also varied by case; for Cases #2 and #3, the percentage of patients for whom a psychiatrist was currently prescribing psychotropic medications was significantly associated with agreement with the experts. **Conclusions:** When treating depression in the presence of medical illness, virtually all psychiatrists appropriately recommended psychotherapy, and most appropriately recommended an antidepressant. Although increasing medical illness severity was accompanied by increasing recognition of the possibility that depression was due to a nonpsychiatric medication or a general medical condition, at least 30% of psychiatrists did not recommend appropriate lab tests or appropriate adjustment of nonpsychiatric medications. Practice characteristics, such as current prescribing tendency, were also predictive of appropriate care. Results from this study can be used to inform continuing medical education efforts in this complex area.

Quality of Psychotropic Medication Use for Depression in Primary Care: Results From the Partners-in-Care PORT Study

I.T. Lagomasino, MD; J. Unützer, MD; K.B. Wells, MD

Objective: Clinically significant depression occurs in 5%–10% of primary care patients, resulting in functional impairments and lessened quality of life for patients and greater medical utilization and cost. Yet, only about 50% of depressed patients are detected in primary care, and only 50% of those detected receive guideline-level treat-

ment. The Depression Patient Outcomes Research Team (Depression PORT) provides recent data on the treatment of over 1,300 depressed primary care patients. In this paper, we examine current psychotropic use among these patients to determine whether treatment for depression in primary care has improved with the advent of newer antidepressants and increasing patient and physician education in recent years. **Method:** We present baseline data on the use of psychotropic medication among 1,356 patients recruited for a multicenter study that will implement interventions for the treatment of depression in primary care. Study patients were receiving their regular care from 43 clinics in seven managed-care organizations throughout the country. Within each clinic, patients suffering from depressive disorders were identified by use of a screening questionnaire and the Composite International Diagnostic Interview (CIDI). Depressed patients who enrolled in the study completed a baseline questionnaire that included questions about psychotropic medication use. Baseline data concerning medication type, dose, and duration of use were collected and analyzed to determine patterns of care. **Results:** Of the 27,332 patients who were screened in primary care, 1,356 of those diagnosed with a depressive disorder enrolled in the study, and 1,204 provided complete information concerning psychotropic medication use. Their depressive diagnoses included major depressive disorder (MDD) comorbid with dysthymia (151; 12.5%), MDD (531; 44.1%), dysthymia (39; 3.2%), and subsyndromal depressive symptoms (483; 40.1%). At baseline, 49.5% reported taking a psychotropic medication in the past 6 months, among whom 74.7% were taking an antidepressant. We describe the use of psychotropic medication with particular attention to the appropriateness of antidepressant dose and duration and the use of minor tranquilizers. We also examine clinical predictors for receiving adequate antidepressant treatment, including the severity of symptoms and the presence of comorbid medical and psychiatric illness and substance abuse. **Discussion:** Too few primary care patients with depression receive guideline-level antidepressant treatments. We present baseline data on antidepressant use in primary care clinics before a large interventional trial in order to assess the current state of care and provide a point of comparison for the effects of new quality-improvement interventions.

Increased Compliance with Antidepressants and Lower Medical/Psychiatric Hospitalizations

G. Fulop, MD, FAPM; M. Kelly, PhD; A. Manwill, BA; R. Brookler, MBA; N. Suppappanya, MS

Guidelines recommend 7–12 months of antidepressant treatment durations for depressive episodes, yet over

40% of patients fail to complete a minimum of 4 months of treatment. Increased duration of treatment has been shown to decrease the risk of relapse/hospitalization. To examine the relationship between increased antidepressant compliance (continuous treatment with antidepressants for greater than 4 months: Compliant) vs. nonadherence (less than 4 months: Noncompliant) and risk of all causes of hospitalizations, we examined all patients receiving a new prescription for an antidepressant (no prescription in the previous 6 months) and subsequent risk of hospitalizations. In an 18-month sample frame, Merck Medco Managed Care, LLC, a pharmacy benefit manager for a major employer, identified 986 employees/dependents of the employer who received a new antidepressant prescription, determined compliance, and observed the hospitalizations in the subsequent year by use of an integrated pharmacy and medical-encounter database. Compliant patients (486; 49%) had an all-cause hospitalization rate/1000 patients/year of 98.9, whereas Noncompliant patients (500; 51%) had a rate of 192.0. Compliant vs. Noncompliant patients' inpatient costs were \$900,000/1,000/year vs. \$1,760,000/1000/year, respectively. Increased medication compliance beyond 4 months is estimated to result in a \$200 increase in drug spend per patient, yet may result in a reduction in medical costs (hospitalization) of \$450/patient. The association of increased compliance with antidepressants and decreased hospitalization rates observed in this historical cohort study suggests the need for a prospective study. Such a study is under way, to determine the causal relationship of antidepressant compliance and impact on medical resource use.

A Step Care Model for Treatment of Depression in Primary Care

W.J. Katon, MD, FAPM; M. Von Korff, ScD; E. Lin, MD; E.A. Walker, MD; J. Unützer, MD; G. Simon, MD; T. Bush, PhD; E. Ludman, PhD; J. Russo, PhD

A total of 2,053 primary care patients who had been started on an antidepressant for a new episode of depression were screened 8 weeks after initiation of treatment by telephone interview that included the SCID. A total of 272 patients (13.3%) completing the screening interview were eligible for randomization to the depression-persistence trial on the basis of their having four or more DSM-IV major depressive symptoms. Over a 16-month period, 228 patients were successfully randomized to a Collaborative Care intervention vs. usual primary care. Intervention patients received enhanced education about depression

via a videotape and a book titled *Depression (Recurrent and Chronic): Self-Care Companion for Better Living*. Intervention patients also received two to five visits with a psychiatric consultant integrated into the primary care clinic. The psychiatric intervention was aimed at improving the psychopharmacologic treatment of major depression. This paper will describe the symptomatic (SCL-20 depression items) and functioning outcomes (SF-36) of intervention vs. control-group patients over a 6-month period.

Psychiatric Tele-Consultation to Primary Care Providers

J.L. Worth, MD; T. A. Stern, MD, FAPM; M. Newman

A Psychiatric Tele-Consultation Unit (PTCU) was developed at the Massachusetts General Hospital (MGH) in response to critical changes occurring in the healthcare delivery system. The PTCU's design was based on an understanding of the needs of MGH primary care physicians (PCPs), as derived from responses by PCPs to a questionnaire survey and focus groups. It was designed to supply specialist expertise to PCPs on a "one phone call away" basis, and to assist the MGH in supporting an increasingly large network of PCPs by expanding access to the MGH psychiatric staff and services. Open Monday through Friday, 9 A.M. to 5 P.M., the PTCU provides PCPs with immediate telephone access to a staff psychiatrist who answers diagnostic and treatment-related questions, often while the patient is in the PCP's office. If a referral for mental health services is required, the PTCU facilitates this, using a referral system based on electronic mail (e-mail). During its first year of operation, the PTCU served 107 PCPs and their 46,377 patients; its projected capacity is 470,000 patients. It provided 595 teleconsultations, of which half were related to diagnosis or treatment, and half were primarily directed toward making a referral. Three hundred sixty-one patients were referred via e-mail distribution lists to a network of 92 clinicians. In 72 teleconsultations (12%), referral for mental health services was prevented. The estimated savings from these prevented services far exceeded the PTCU's costs of providing all 595 teleconsultations. Projected savings when the PTCU reaches full capacity are projected at \$340,364 from prevented referrals for mental health services. Follow-up semistructured interviews of the first 81 PCP callers revealed that 71% were "extremely," 18% were "very," and only 2% were "not at all" satisfied with the PTCU. PCPs reported the PTCU saved them time in 85% of teleconsultations.

tations. Teleconsultations related to diagnosis or treatment changed PCPs' diagnosis 20% of the time, and changed the PCPs' treatment plan in nearly two-thirds of cases; 20% of the teleconsultations were done while the patient was in the PCP's office; 94% of the PCPs enthusiastically said they would use the PTCU again.

DLIN/Fischer Award

Psychiatric Illness and Healthcare Utilization in an HMO Population With Traumatic Brain Injury

J. Fann, MD; R. Thompson, MD; K. Jaffe, MD; W.J. Katon, MD, FAPM

Objectives: To determine 1) if psychiatric illness is a risk factor for traumatic brain injury (TBI); 2) if TBI is a risk factor for subsequent psychiatric illness; and 3) if psychiatric illness after TBI increases total and nonpsychiatric healthcare utilization in a staff model HMO. **Methods:** This study uses an HMO population-based cohort design to determine the risk of psychiatric illness in the 3 years after TBI and the contribution of psychiatric illness to healthcare utilization after TBI. A 1-year nested case-control design was used to determine the risk of having a TBI after psychiatric illness. The HMO has approximately 400,000 enrollees in the five-county Puget Sound area. Individuals of all ages with a TBI in 1993 were identified by use of automated ICD-9 diagnostic codes and were separated into mild and moderate/severe TBIs. Three controls for each case were frequency-matched on age, gender, and reference time. Psychiatric illness was identified by use of ICD-9 codes, utilization data, and pharmacy data. Automated cost-accounting data were available for all subjects. **Results:** Identified as having a TBI in 1993 were 1,541 individuals. Eighty-nine percent had mild TBIs, and 11% had moderate/severe TBIs. Having a psychiatric illness in the year before the reference time was found to be a risk factor for incidence of TBI, with the risk highest for those with a psychiatric illness (18.4%) in the 6 months before the reference time (odds ratio: 2.1; 95% CI: 1.8–2.4). TBI was also a significant risk factor for subsequent psychiatric illness for the 3 years after TBI, with the highest risk of psychiatric illness (23.5%) during the first 6 months after TBI (relative risk: 2.4; 95% CI: 2.1–2.7). Those with moderate/severe TBI had a higher risk of developing psychiatric illness than those with mild TBI. Rates of organic mental disorders, alcohol/drug abuse, and depression saw

the most marked increases after TBI. Among individuals with TBI, those with psychiatric illness during the 6 months after their TBI incurred a mean of \$5,162 ± 949 and a median of \$1,452 more total healthcare costs in those 6 months than those without a psychiatric illness. This trend continues throughout the 3-year follow-up period. The largest impact of psychiatric illness on medical costs appears to be in outpatient medical specialty, emergency department, and medical inpatient costs. The impact of psychiatric illness on medical costs is much larger among TBI patients than among non-TBI patients. **Conclusions:** Traumatic brain injury is highly prevalent in a large staff model HMO. Psychiatric illness is a significant risk factor for having a TBI. TBI is a significant risk factor for the development of subsequent psychiatric illness. Psychiatric illness after TBI leads to significant increases in medical healthcare utilization.

Best Resident Research Paper Award

From Innovation to Evolution: A History of Tourette's Syndrome

S.C. Schlozman, MD

“Madness is the most solitary of afflictions to the people who experience it; but it is the most social of maladies to those who observe its effects.”¹

Medical historians have suggested that the conceptualization of mental illness fluctuates as a function of prevailing world views.^{1–3} Some have even asserted that the very meaning of psychiatric disease is “but a distorted mirror image of the shifting social order.”³ Thus, mental illness is frequently understood within a socio-cultural context. In this sense, the history of each individual mental illness is governed by the theories and practices that reflect the society in which the illness is observed. Given the unique and ongoing relationship between psychiatry and culture, changes in our understanding of mental illness can only result from a willingness to break from established conceptualizations.

Tourette's Syndrome, with its striking and often socially unsettling symptoms, offers an opportunity to explore the historical interplay of psychiatric disease and social forces. Utilizing original texts and case reports, this article will discuss the conceptualization of Tourette's Syndrome over the last 500 years. Although medieval scholars saw the disorder as a sign of satanic possession, early 19th-

century Europeans understood the syndrome as a subset of hysteria. In the mid-19th century, Jean Martin Charcot originally conceptualized the disorder as a form of chorea, but by 1885 Gilles de la Tourette established the syndrome as a distinct neurologic entity. Early and mid-20th century clinicians viewed the disorder primarily in psychoanalytic terms, and modern explorations involve a complex interplay of neuropsychiatric investigations and interventions, as well as psychologically minded treatments. Each stage of conceptualization is rich with that period's cultural and scientific paradigms, but each change in conceptualization required a break from the existing paradigms. Thus, the understanding of a complex disorder has evolved through a synthesis of past explorations and courageous innovations.

Current Description of the Syndrome. Tourette's Syndrome is a neuropsychiatric illness that is characterized by the childhood onset of semivoluntary phonic and motor tics. Prevalence of the disorder has been estimated at 1 case per 1,000 boys and 1 per 10,000 girls.^{4,5} Also, there is substantial comorbidity with Obsessive-Compulsive Disorder and Attention Deficit/Hyperactivity Disorder, sometimes estimated as high as 60% and 50%, respectively.⁴ Although the DSM-IV specifies that the syndrome must present before age 18, the modal age at onset for tics is between 7 and 9 years of age.^{4,6}

Tics have been defined as sudden, repetitive, non-rhythmic, stereotyped movements or outbursts.⁶ Although simple tics might consist of grunting or jerking one's head repeatedly to the right, more complex tics involve semipurposeful movements, such as spinning or jumping, or the tendency to cry out complete words or sentences.⁷ Coprolalia, the uncontrollable uttering of obscenities, is perhaps the most unsettling symptom of the disorder, although it occurs in only about 20% of those suffering from Tourette's Syndrome.⁸ Finally, tics have been described as semi-voluntary. Although many patients note that they are able to suppress tics for varying lengths of time, most complain of increasing anxiety and exhaustion the longer a tic is suppressed. Ultimately, almost all tics declare themselves.^{4,9}

Perhaps the most intriguing aspect of Tourette's Syndrome is the tendency for tics to appear at the most socially inappropriate moments. Patients often note decreasing compulsions to express their tics in affectively neutral environments. However, tics often become very difficult to control precisely when they are most likely to offend.^{10,11} Thus, modern case reports include a description of a young American boy who shouted obscenities in church, and a

Chinese girl who expressed anti-government slogans in a busy Shanghai square.¹² In instances such as these, patients describe their sense that the extent to which their tics would be socially abhorrent correlates closely with their worsening control over their outbursts. Indeed, it is this aspect of the disorder that is responsible for the enthusiasm and perplexity that has characterized discussions of the disease over the last five centuries. Unfortunately, it is also this aspect that is responsible for a great deal of pain and social stigma throughout the ages for those who have suffered from Tourette's Syndrome.

Medieval and Early Renaissance Explorations.

Amadeus Mozart and Samuel Johnson are two of the more well known public figures purported to have displayed the characteristic motor and phonic tics now associated with Tourette's Syndrome.^{13,14} Also, there are numerous less-famous individuals whose historical descriptions are consistent with the disorder. For example, the 17th-century French aristocrat, Prince de Conde, reportedly needed to stuff stockings into his mouth to suppress his urge to bark while in the presence of King Louis XIV.¹⁵ However, if one limits the historical survey to the first individual to actually seek treatment for Tourette's Syndrome, a compelling case is presented in a 15th-century text describing the proper methods of recognizing and exorcising witches and witchcraft.

The *Malleus Maleficarium*, or *Witches Hammer*, was originally published in 1498 after Pope Innocent VIII commissioned its authors at the University of Cologne to draft the definitive document detailing the growing witchcraft menace.¹⁶ In their writing, the Very Reverend Fathers Henry Kramer, Professor of Sacred Theology and Inquisitor of Heretical Depravity, and James Sprenger, Professor of Sacred Theology and Prior to the Dominican Convent at Cologne, describe a number of case reports in which unusual and frightening behavior was brought to their attention because of the prevailing belief that the behavior suggested satanic possession. As one might expect, a large number of the individuals described displayed symptoms entirely consistent with various forms of major mental illnesses. Unfortunately, but not necessarily surprisingly, the authors often first suggested exorcism and then later execution if the individual could not be made to cease his or her aberrant behavior.

Interestingly, in one case, the Reverends report that a young man brought in by his father appears to suffer differently from the more routine cases of possession to which they had become accustomed. The father noted that his son, a pious young man, had distinguished himself at an early

age as a secular preacher. However, the father had recently become increasingly concerned by his son's growing tendencies to "thrust his tongue far out of his mouth . . . when he passed any church and genuflected in honor of the Glorious Virgin." Indeed, the son laments, "I am only deprived of the use of my reason when I wish to contemplate holy things or to visit sacred places."¹⁶ The authors of the *Mal-leus Maleficarium* were particularly fascinated by the boy's story. They remark that he seemed different from other cases of possession, and they note that the "length of intervals during which he had the use of his reason [was] more than is usual than in the case of persons possessed." The boy seemed similarly perplexed. In describing his desire to resist his troubling impulses, he complained:

I cannot help myself . . . for so he uses all my limbs, my organs . . . causing me to speak or to cry out; and I hear the words as if they were spoken by myself but I am unable to restrain them.¹⁶

Perhaps it was these differences that led the Reverends Kraemer and Sprenger to consider a cure through fasting and praying, rather than utilizing the more commonly employed tools of exorcism. In fact, after 40 days of bread, water, and prayers, they note that the boy's behavior ceased, and they subsequently arrested a neighboring family that the boy had implicated as having lustful thoughts during religious sermons. Given the spirit of the time, it is doubtful that the members of the accused family were treated as sympathetically as the young man!

Several aspects of the boy's story are remarkable. First, his facial grimacing during socially inappropriate moments is consistent with Tourette's Syndrome. Typically, tics are not altogether random; they appear during times of stress, and they tend to worsen exactly when it is socially abhorrent for them to do so.^{10,11} Thus, in a world where insulting the church is a capital offense, one needs to behave respectfully in religious settings. To do otherwise might quite literally be fatal. Second, the Reverends Kraemer and Sprenger note that the boy appears to retain his sanity. They contrast this to more typical cases of possession, in which the afflicted individuals seemed more consistently confused or deranged. The Reverends' fascination with this aspect of the boy's case, and their willingness to try alternative methods based on their observations, mirror closely the great pains that Gilles de la Tourette himself took nearly 400 years later as he stressed the absence of insanity in those afflicted with the disorder he sought to characterize.^{17,18} Finally, after 40 days of fasting, the boy's apparent tics cease immediately after he implicates another

family's misdoings. He appears to experience a sort of abreaction, and the catharsis frees him from his behavior. Although it is likely that the savvy and hungry young man simply concentrated sufficiently to suppress his tics and divert attention in favor of his release, it is fascinating that the same belief in catharsis as a cure for strange behavior was prominent during the psychoanalytic exploration of Tourette's Syndrome in the early 20th century.¹⁹

Tics, Hysteria, and the Early 19th Century. Descriptions consistent with Tourette's Syndrome disappear from medical note until roughly 1800, when Bouteille, a French physician, wrote *Traite de la Chorée*, one of the first modern works devoted to characterizing and cataloging choreiform movement disorders.^{20,21} Although much of the chorea in 19th-century Europe represented symptoms consistent with the sequelae to rheumatic fever, it is clear from Bouteille's writing that early 19th-century physicians found choreiform movement, and probably all movement disorders, compelling and unsettling. In describing chorea, Bouteille wrote:

Everything about this condition is extraordinary—its name absurd, its symptoms unique, its character baffling, its cause unknown, and its treatment problematic. Serious investigators have doubted its very existence. Others have felt it to be a form of malingering, and some have felt it be of supernatural origin.^{20,21}

In 1818, Bouteille noted that some patients who were previously thought to suffer from chorea displayed facial grimacing and involuntary movements. He felt that these abnormal movements lacked the characteristics of true chorea, and he began to write about a pseudo-chorea syndrome.²² Although it is possible that his descriptions suggest the first medical attempt to characterize tic behavior as a distinct syndrome, Bouteille's writings on the subject were largely ignored, and tic-like disorders continued to be thought of as a subset of chorea.

Then, in 1825, Jean-Marc Gaspard Itard, a French physician and philosopher, wrote what is likely the first medical case report of a patient who suffered from what today would be called Tourette's Syndrome. He published his description of Madame de Dampierre in the French Archives of General Medicine.^{23,24} The patient, a 26-year-old French aristocrat, was a minor scandal in French society circles. Impeccably educated and well-bred, her grimaces, involuntary movements, and coprolalia could not help but to attract attention in Parisian aristocratic crowds. Itard seemed most alarmed by her tendency towards speaking obscenities, and he noted that she often behaved poorly at

the most inappropriate moments. In his 1825 article, he wrote:

In the midst of a conversation that interests her extremely, all of a sudden, without being able to help it, she interrupts what she is saying or what she is listening to with bizarre shouts and words that are even more extraordinary and which make a deplorable contrast with her intellect and her distinguished manners.^{22,23}

Itard was fascinated that the more the Madame worried about the uncouth nature of her obscene thoughts, “the more she [was] tormented by the fear that she [would] utter them.”^{23,24} He further noted that her “preoccupation” with obscenities was “precisely what put them at the tip of her tongue, where she could no longer control” her tendency to speak them. In retrospect, it looks as if Itard nicely characterized the obsessive nature of tic behavior often described in Tourette’s Syndrome, as well as the semi-voluntary nature of most tics. However, Itard incorrectly believed that the syndrome he was trying to describe occurred predominantly in women, and he interpreted the Madame’s behavior in the context of early 19th-century conceptions of hysteria.²⁴

Itard believed that movement disorders in the absence of delirium were more common in women than in men, but at the same time less serious. He felt that women often suffered from an inability to be happy in their social and gender roles, and he felt that this unhappiness led to a wide range of strange behaviors, usually referred to as hysteria.^{24,25} Women were felt to be much more susceptible to hysteria than men, and Itard recommended treating hysteria by helping women to modify their feminine roles. In his 1825 article, he described a total of three women with tic behavior, including the Madame de Dampierre. He noted that one had suffered as an orphan, thus never experiencing a true mother. The second was the victim of an unhappy marriage, and Itard treated both of these women with courtly walks in public areas, hoping to help them to overcome their fears of humiliation. In the Madame de Dampierre’s case, Itard gravely reported that her lack of children, leading to her subsequent loss of the beneficial graces of motherhood, prevented any real progress to be made in the Madame’s cure.

If one presumes that Itard’s cases represents true Tourette’s Syndrome, it is likely that Itard unwittingly characterized the ability of most Tourette’s patients to at least partially control their embarrassing movements. That the first two women were able to suppress their tics in public, while the Madame de Dampierre could not, merely sug-

gests the differing severity of tic syndromes from patient to patient. In any event, Itard’s descriptions surfaced off and on for the next 30 years, but did not attract any real attention until Gilles de la Tourette accepted a challenging assignment from his mentor, Jean-Martin Charcot.

Gilles de la Tourette and the Formal Classification of Tourette’s Syndrome. Gilles de la Tourette was born in 1857 near the small French village of Loudin. Although he was the eldest son to a merchant, there were many physicians in his family, and it appears that he became interested in medicine at an early age. After distinguishing himself academically, he began medical school at the young age of 16 in Pontiers, France.^{22,26,27} Although one might argue that Paris would have been more suitable for the eager and energetic young student, Tourette’s mother feared that her son would be sidetracked into an exploration of the arts at the expense of his medical training, and it was she who apparently insisted that he attend school in a less diverting environment. Indeed, Tourette was distractible, often becoming excited by numerous and varied disciplines, and his energy and enthusiasm for his pursuits both impressed and annoyed his colleagues. One classmate found him “extremely energetic, constantly striving to overcome the instinctive laziness which stultifies us when it is hard to express original ideas.”^{22,27} Still, a less flattering recollection from a different colleague described Tourette as “neither good nor bad, neither studious nor lazy, neither intelligent nor foolish.” The apparent detractor went on to accuse Tourette of vacillating “with his confused and malicious mind between a multitude of faults without lingering.”^{22,26} Clearly, Tourette did not arouse ambivalence among his associates.

Tourette appeared interested in behavior and human nature throughout most of his life. At a relatively young age he wrote a treatise examining a witch trial that had occurred nearly 100 years earlier near his hometown.^{15,28} In the trial, a young priest was accused of possessing an abbey of nuns, and, as if to confirm the accusation, the Sisters rolled on the ground, grimaced, and shouted obscenities in the priest’s presence. Tourette, apparently intrigued by pathological grimacing even before he became a physician, felt that the nuns’ behavior was most consistent with hysteria. After becoming a physician, he trained in Charcot’s famous clinic, the Hôpital de la Salpêtrière, where he continued his interests in behavior. He finished his training and soon became interested in hypnosis, eventually writing an influential paper about the limitations of hypnosis in usurping another person’s will. Ironically, it was his own paper that was used in his defense after one

of his former patients shot him, claiming that she had been controlled by his hypnotic influence. Following the injuries he incurred in the shooting, he never fully recovered, and he died in Switzerland in 1904, suffering from dementia and possibly neurosyphilis.^{15,22}

Tourette joined Charcot's clinic in 1884 as an intern. Charcot was quickly impressed by the enthusiasm of his new student, and he assigned Tourette the difficult task of reclassifying the movement disorders. At the time, abnormalities of movement were thought most consistent with either chorea or hysteria, but Charcot was becoming increasingly disillusioned by the limitations of the prevailing nosology. For Tourette, the opportunity to make a significant contribution at such a young age must have been invigorating, and he attacked his new assignment exhaustively.

Tourette began by searching the literature for descriptions of movement disorders that could not be readily classified. He first examined an article in the *Journal of Nervous and Mental Disease* from 1880, written by the American physician, George Beard.²⁹ The article, translated into French in 1881, was titled "Experiments With the Jumpers or the Jumping Frenchmen of Maine." In his writing, Dr. Beard described a population of French Canadians, residing at the time in Maine, who suffered from severe startle myoclonus, echolalia (the pathological tendency to repeat what has just been said by someone else), and echopraxia (the pathological tendency to imitate exactly another's actions). Beard felt that the individuals did not display the "slightest signs of hysteria," but he was baffled by their inability to prevent themselves from "repeating the word or sound that came from the person that ordered them any more than they could help striking, dropping, jumping or starting."²⁹ Tourette was also intrigued by the strange descriptions, and he began to scour the literature for similar cases.

His review next took him to a nonmedical article describing the Malaysian syndrome of *latah*. The article, by H. A. O'Brian, appeared in an 1883 edition of the British political periodical, *The Journal of the Straits and British Asiatic Society*.³⁰ According to the article, *latah* appeared to be a general term used by Malaysian natives in reference to anyone who displayed aberrant behavior. For example, an individual seen muttering to himself would simply be called "*latah*" by his those around him.^{22,30} However, the article then went on to specify the various categories of *latah* that were found in the Malaysian islands. One subset of individuals sounded very much like the Jumping Frenchmen, displaying startle myoclonus, echopraxia, and

echolalia. Also, these individuals also apparently suffered from coprolalia, as well. In his description of this type of *latah*, O'Brian described a young woman who suddenly departs from her usual graciousness and surprises O'Brian with an alarming retreat from social protocol:

I talked to her for at least 10 minutes, without perceiving anything abnormal in her conduct or conversation. Suddenly, her introducer threw off his coat. To my horror, my venerable guest sprang to her feet and tore off her kabayah [a traditional Malaysian garment] . . . calling him an abandoned pig . . . all the time reducing herself to a state of nudity.³⁰

Tourette continued his search for similar references, and he next happened upon an 1884 article from *The New York Medical Journal*.³¹ The article, written by W.A. Hammond, described the Siberian syndrome of *miryachit*, although Hammond had actually never witnessed the syndrome.^{22,31} Instead, Hammond was fascinated by stories about *miryachit* that he collected from American soldiers who had been stationed in Siberia, and he tried to describe the syndrome on the basis of the soldiers' recollections. According to Hammond's article, *miryachit* appeared to involve echolalia and echopraxia only; coprolalia was not reported as part of the syndrome. The American soldiers regarded *miryachit* with awe and, in some cases, pity. In Hammond's article, one passage describes a soldier's feelings for a river steward who suffered from the disorder:

To annoy him, some of the passengers imitated pigs grunting or called out absurd names . . . others threw their hats on the decks suddenly, and the poor steward, suddenly startled, would echo them all precisely, and sometimes consecutively.³¹

Tourette was struck by the similarities in the symptoms of the three syndromes. The Jumping Frenchmen, *latah*, and *miryachit* all seemed to involve movement abnormalities not readily consistent with chorea or hysteria. Perhaps reasoning that if there were Jumping Frenchmen in Maine there ought to be Jumping Frenchmen in France, Tourette began to search Charcot's clinic for patients with similar presentations. His search led him to a 15-year-old boy who probably represents the first description by Tourette of the disorder that now bears his name. Tourette wrote:

The case involves a young man who is 15 years old, has a good constitution, is smart, and has sound reasoning, but who suffers from extreme hyperexcitability, from particular tics, and convulsive movements of his head and waist. After all of these movements he almost

always shouts 'shit.' Besides, if one talks in front of him, the boy carefully repeats the two or three words that ended the sentence just said.^{18,22}

Tourette was convinced that the 15-year-old boy, the Jumping Frenchmen, those suffering from latak, and those suffering from miryachit all were afflicted by the same disorder. He described his findings in an 1884 article titled "Jumping, Latak, and Miryachit," published in *The French Archives of Neurology*.¹⁸ Tourette may have worried that the apparently vulgar behavior of the individuals he described would be distasteful to his audience; he mistranslated O'Brian's writing, changing the wording so that the woman with latak dropped only her robe but was not completely uncovered.²² That Tourette was willing to make subtle changes in his descriptions perhaps speaks to his appreciation for the cultural implications of a disorder that causes its sufferer to break from social norms.

Tourette continued his search for patients whom he felt suffered from the same disorder as the young boy in Charcot's clinic. After a year of further investigation, he reported that he had discovered six "personally observed" patients and three more who had been "seen by others." All appeared to suffer from characteristic motor and phonic tics, and Tourette became increasingly convinced that he was actually describing a new disorder. The nine patients became the subjects of Tourette's seminal article, "Study of a Neurological Condition Characterized by Motor Incoordination Accompanied by Echolalia and Coprolalia," published in *The French Archives of Neurology* in 1885.¹⁷ Interestingly, many of Tourette's conclusions regarding the new disorder were based on his descriptions of the same Madame de Dampierre that Itard had described 60 years earlier. Although it is unclear whether Tourette ever actually saw the Madame in Charcot's clinic, he includes her as one of the three cases "seen by others," and it is likely that the Madame's reputation and public behavior were well known to Tourette and his colleagues.²⁴ In his article, Tourette devotes a great deal of time to his description of the Madame, and the richness of Tourette's language provides insight not only into Tourette's clinical acumen, but also into the extent to which socially inappropriate behavior was distasteful and offensive to Victorian sensibilities. In describing the Madame, Tourette wrote:

She was felt to be suffering from extreme overexcitement and mischief and because the movements became more and more frequent, she was subject to reprimand and punishment. . . . The movements involved the shoulders, the neck, and the face, and resulted in con-

tortions and extraordinary grimaces. . . . The young lady made strange screams and said words that made no sense. . . . The young lady was therefore sent to Switzerland under the care of a doctor who specialized in nervous disorders, relying primarily on milk baths as his form of therapy. . . . She married after this period and it was hoped that the stability of the marriage would maintain her virtual cure, however, again she was greatly disappointed, for the disease suddenly reappeared. The patient, never having given birth to a child, has been deprived of the physical and emotional benefits ordinarily provided by the state of maternity. . . . In 1884, the newspapers published her obituary and some of them included for their readers a list of the obscene words that she had sadly pronounced, in particular "shit" and "dirty pig."^{17,21}

From these case reports, Tourette concluded that in the new disorder, small, abrupt movements usually preceded more elaborate tics, and he noted that the abnormal movements typically migrated downwards from the face throughout the body. He further noted a male predominance and childhood onset, and he correctly discerned the waxing and waning natural history of the disease. Perhaps most importantly, he stressed that those suffering from the disorder were sane, cognitively intact, and not suffering from hysteria.^{17,21,22}

With only nine cases, Tourette was able to draw a remarkable number of conclusions that have withstood modern scrutiny. For example, it is well known that Tourette's Syndrome is more common in men than in women, and the current DSM-IV criteria specify that the disorder must have its onset before age 18.⁴⁻⁶ The fluctuating course is also well known,⁴ although Tourette's assertion that tics remit during both fever and sleep is not necessarily correct. Perhaps the most obvious error in Tourette's conclusions is his belief that echolalia and coprolalia were always part of the syndrome. In truth, coprolalia exists in only about 20% of those with Tourette's Syndrome, and echolalia is even rarer. However, it is likely that the glaring nature of improperly uttered obscenities helped Tourette to more easily identify his subjects; indeed, modern conceptualizations of Tourette's Syndrome usually specify that those patients with coprolalia and echolalia typically have more severe cases than those who display less complex vocal tics.⁴ By looking for the most unsettling symptoms, Tourette was able to identify in a relatively short amount of time enough patients from whom to draw his conclusions.

Tourette's reliance on his description of the Madame de Dampierre is not without controversy.²⁴ It is not at all clear that Tourette ever really saw the patient up-close; he

may, in fact, have merely encountered her at social gatherings and then gathered data from others. Tourette does not make this clear in his case report, and many of the subsequent translations of his writings have also been potentially misleading on this matter. Furthermore, why would Tourette rely so heavily on a female case to characterize a predominantly male disorder, and, if Tourette never really medically examined the Madame, why jeopardize the integrity of his article by including her story?

The most likely explanation lies in the possibility that Tourette may have needed the Madame's case to establish both the chronicity of the syndrome and his incorrect assertion that coprolalia was always present.²⁴ All of the patients except the Madame were less than 30 years old at the time of his article, and only five of the cases displayed true coprolalia. Tourette may have assumed that the fact that the Madame's symptoms continued throughout her life suggested that the disorder did not remit; he may also have concluded that her fluctuating vocal symptoms proved that all persons with the disorder would eventually have episodes of coprolalia. Also, Tourette was undoubtedly more unsettled by a woman displaying coprolalia than a man with similar symptoms. In musing about the strangeness of coprolalia, Tourette wrote:

One could understand how a 19-year-old lad could have obscene ideas and translate them into words. But that women, young girls . . . should change inarticulate screams into obscene expressions is particularly unusual and entirely unexplained.^{17,21}

Thus, Tourette may also have included the Madame's story because of his belief that her suffering represented the more debilitating and shocking aspects of the disorder.

Meanwhile, Charcot was feeling increasingly stifled by the existing nosology for movement disorders, in which all abnormalities were classified as either chorea or hysteria. By all accounts, he was delighted with Tourette's work. Prior to Tourette's descriptions, patients displaying tic behavior were thought to suffer from a subset of hysteria. Tourette's assertion that his patients lacked any of the clinical signs of hysteria or chorea seemed to suggest both a new disorder and the potential to break from the existing paradigm. Around 1885, Charcot began paying tribute to Tourette's efforts, referring to all patients who displayed tics as suffering from Tourette's Syndrome.^{15,24} At the time, Tourette was 27 years old, and Charcot's attention to Tourette's scholarship helped to bolster Tourette's blossoming medical and scientific reputation.

Disagreements and Dissent. Not everyone in the

medical community was pleased with Tourette's work. In particular, George Guinon, another of Charcot's pupils, mounted the most serious of the early attacks on Tourette's conclusions.²⁴ As a fellow intern, Guinon may have been annoyed by Charcot's attention to Tourette, and Tourette's reputation for brashness and egotism probably did not endear Tourette to all of his colleagues. Also, it appears as if Guinon actually had more experience with tic behavior, and he argued that Tourette's conclusions were based on observations that were both too brief and also incorrect.^{11,12}

Most importantly, Guinon felt that Tourette ignored the obsessive nature of many of the patients who displayed tic-like movements. In his writing, Guinon described a patient with tics who felt compelled to count to seven every morning. Asserting that many patients with tics displayed similar obsessive behavior, Guinon criticized Tourette for failing to note this important and seemingly hysterical aspect of the syndrome. Guinon further reasoned that many patients without tics displayed echolalia during hypnosis. Given the prevailing belief that only patients with hysteria were susceptible to hypnosis, Guinon concluded that Tourette had merely succeeded in accentuating the already-present conceptualization that tic behavior occurred only as a subset of hysteria.³³ Although Guinon's writings are not often mentioned in the literature, he deserves credit for correctly identifying the very common comorbidity of Obsessive-Compulsive Disorder in those suffering from tic disease.^{4,34}

In addition to Guinon's criticisms, Tourette's new classification suffered with Charcot's faltering reputation. Near the turn of the century, Charcot's judgment was increasingly questioned. He began lecturing that metals, and especially magnets, could effect cures for a host of illnesses, and he named this treatment *modality metalloscopy*. The medical community was quick to doubt Charcot's assertions on the matter, although some texts suggest that many physicians were equally prepared to criticize Charcot for the dictatorial manner in which he ran his clinic.²⁴ As Charcot's position in the medical community came under closer scrutiny, so did Tourette's conclusions regarding the new disorder. Physicians began rejecting Tourette's initial findings, and tic behavior reverted to its previous position as a subset of hysteria. Indeed, by 1899, Tourette himself began referring to "Convulsive Tic Disease" instead of Tourette's Syndrome, and he appeared ready to admit that many patients with tics displayed a number of psychological symptoms. Tourette wrote:

[the syndrome] almost always exposed a condition of mental instability characterized by numerous phobias,

of arithmania, agoraphobia, and all stigmata which today are referred to as mental degeneration.^{24,36}

Sigmund Freud's writings were also beginning to attract attention, and the interpretation of tic behavior within a psychoanalytic context seemed plausible and intriguing. Thus, as Charcot's reputation floundered and new theories gained momentum, the term Tourette's Syndrome virtually disappeared from the medical literature over the next 50 years.^{24,37,38}

Psychoanalytic Exploration of Tic Behavior. Numerous explorations of tic behavior exist throughout the psychoanalytic literature. Central to these psychoanalytic interpretations is the belief that patients with tics were displacing intolerable thoughts and feelings into strange, seemingly unrelated behaviors. In 1893, Freud perpetuated this notion by stressing that tics were an attempt to quell expression of "the distressing antithetical idea."^{29,40} He described a young woman who felt tortured by her need to be silent in the presence of her sick and sleeping daughter. In response to her fear that she might in fact awaken her child, the woman began making a clicking sound with her tongue, although it was only under hypnosis that she was able to connect her behavior with her fears. However, in spite of these early assertions, it is worth noting that by 1921 the Italian psychoanalyst Ferenczi wrote that Freud had recently begun postulating a more organic etiology for tic syndromes.⁴¹

A fascinating American example of the interpretation of tics within a psychoanalytic context can be found in Oberndorf's 1916 article, "Simple Tic Mechanisms," appearing in the *Journal of the American Medical Association*.¹⁹ In his article, Dr. Oberndorf, a clinical instructor in neurology at Cornell Medical School, presents three cases for which he postulated tics as defenses against autopleasurable acts. Oberndorf wrote that tics constituted:

... a compromise, just as most other neurotic symptoms are compromises, to retain and at the same time abandon an act which originally yielded satisfaction but which has become intolerable because it cannot be brought to harmonize with the individual's idea of adult or adolescent propriety.¹⁹

In his article, Oberndorf described a young man who suffered from claustrophobia and a tendency to suddenly jerk his head to the right. Oberndorf obtained an extensive developmental history and discovered that his patient had fond memories from his childhood, when he loved rolling

down country hills with other girls in his neighborhood. By age 10, the patient recalled that he was similarly aroused by spinning in circles until he felt dizzy. According to Dr. Oberndorf, the patient's tendency to enjoy spinning and rolling stopped during puberty, when the young man replaced his previous autopleasurable acts with masturbation. However, because the patient felt guilty about his masturbation and felt too old to continue spinning, he substituted these behaviors with the more acceptable habit of jerking his head. Dr. Oberndorf wrote:

His masturbation and sexual maladjustment constituted his urgent difficulty for 15 years, and perhaps . . . the turning of the head may be a symbolic movement of shaking off his trouble.¹⁹

By 1921, the psychoanalyst Karl Abraham wrote that tics, including coprolalia, resulted from "anal sadism," and he categorized tics as "one stage lower than the hysterical conversion syndrome . . . nearer to catatonia than to hysteria."⁴² This tradition was continued into the 1940s, when Mahler and colleagues wrote a series of very influential papers in which tics were interpreted within a developmental context.^{43,44}

Mahler wrote that tics had different meanings and different prognoses, depending on the age of presentation. For example, preschool-age children were felt to exhibit tic behavior as a result of the psychic conflict between overtaxed affective feelings and the need for personal control. Mahler did not regard tics during this period as especially serious; however, he felt that as a child gets older, the persistence of tics signaled a more profound psychological deficit. School-age children were thought to tic in response to their guilty feelings surrounding their burgeoning sexuality, but he also felt that they retained enough ego function to understand their guilt and the resulting behavior. Adults, meanwhile, were considered the most seriously affected; tic behavior in adults was thought to exist often outside of the adult's capacity to fully realize the earlier guilt that had led to his or her strange manners. Until the mid-1960s, Mahler's psychoanalytic conceptualization of symptoms consistent with Tourette's Syndrome essentially dominated the medical literature.^{24,38}

Contemporary Conceptualizations of Tourette's Syndrome. Psychoanalytic interpretations of tic behavior remained popular with both neurologists and psychiatrists for more than half of the 20th century. However, in 1965, Arthur Shapiro, a psychiatrist at Mt. Sinai School of Medicine, and his wife, Elaine Shapiro, a psychologist also at Mt. Sinai, began to conceptualize tics as symptoms of a

neuropsychiatric disturbance. The Shapiros embarked on their exploration of Tourette's Syndrome after Arthur received a tantalizing and confusing referral from a neurologist colleague.

The neurologist referred a young woman who suffered from "habit tics . . . hysterical personality . . . and *la belle indifférence*," or a seeming lack of concern for the severity of her strange behavior.³⁷ Amidst her facial and body twitches, perhaps most disturbing among her symptoms was her tendency to shout the word "cocksucker" in public arenas. Dr. Shapiro began seeing the patient in psychotherapy, and although he considered himself a skilled therapist, he could find no psychological reasons to explain her severe behavior.³⁷ Frustrated, he turned to the literature and conducted an exhaustive review of tics and related disturbances. After wading through the psychoanalytic dominance of the subject over the last 50 years, he eventually "rediscovered" Tourette's Syndrome and Tourette's initial assertions. He also noted that a new drug, haloperidol, was enjoying some success in Europe in treating patients with tics, and he and his wife applied to the FDA to conduct clinical trials in the United States on the efficacy of haloperidol for patients with tics.^{27,45,46} Thus, a single referral, coupled with a frustrated psychiatrist, led to the reintroduction of Tourette's original work and the reinstatement of Tourette's name in reference to the disorder.^{9,37}

In the haloperidol clinical trials, the Shapiros noted remarkable results for patients suffering from Tourette's Syndrome,⁴⁷ and quickly the news of their work spread. Importantly, they widely publicized the lack of psychosis or dementia in patients with Tourette's Syndrome, and they were instrumental in improving both diagnosis and treatment of all tic disorders.⁴⁸ The inclusion of the disorder in *The Diagnostic and Statistical Manual of Mental Disorders* helped to standardize the characteristics of the disorder, and public interest in Tourette's syndrome steadily grew. By the late 1960s, newspaper articles discussing the disorder began appearing, including headlines such as "Weird Psychosis Cured by New Drug" in *The New York Post* in 1967. Soon, the national television networks, *The Wall Street Journal*, and *Newsweek* all had run stories detailing the disorder and its treatment.³⁷ It seemed that 20th-century denizens were every bit as fascinated as medieval priests and Victorian Parisians had been with a disorder that preserved sanity but produced socially inappropriate actions.

Today, Tourette's Syndrome has been called a "paradigm for neuropsychiatric illnesses,"⁴⁹ and a "model neuropsychiatric disorder."⁵⁰ Pathophysiologic discussions involve a complex interaction of dopaminergic, noradren-

ergic, and serotonergic pathways.^{7,51} The basal ganglia have been implicated in neuroimaging studies, and genetic studies have suggested at least a partial familial inheritance. The wealth of increased understanding has led to a remarkable growth in available treatments, and multiple medications and treatment modalities have been found to offer substantial relief.

However, in spite of the current primarily biological conceptualization of Tourette's Syndrome, few would argue that the disorder does not have profound psychological morbidity.^{49,53} Any syndrome that robs its sufferer of a sense of self-control will have a lasting psychological impact. The best centers combine both an appreciation for the complexities of the pharmacologic therapies available, and an attempt to work with patients in a dynamic and psychological milieu. As the commonly accompanying illnesses of attention-deficit hyperactivity disorder and obsessive-compulsive disorder become better recognized, clinicians often must treat multiple symptoms with myriad modalities. A paragraph from a modern case series nicely displays the current appreciation for the intricacies and nuances of patients who suffer from Tourette's Syndrome.⁴⁹ In describing a young man with the disorder, clinicians at the Yale Child Study Center wrote:

Oscar's extremely dramatic, complex actions included sudden lurches forward, punches at people close to him, which stopped only millimeters away from their targets, and contortions of the neck and trunk. He yelled, shouted, and cursed. . . . For Oscar, the movements and sounds were not painless, and they did not simply "happen." Instead, he felt intense, electric-like sensations shooting through his muscles and into the apparatus of speech: only by his forceful, dramatic movements, writhing, and sounds could he reduce internal tension. . . . His outstanding academic progress spoke of his courage, basic endowment, and familial support.⁴⁹

Tourette's Syndrome remains a complex and fascinating disorder. Indeed, the description above is rich with the same language that has characterized depictions of the syndrome for almost 500 years. In spite of the rapidly increasing understanding of the disorder, the striking and sometimes unsettling nature of Tourette's Syndrome will continue to intrigue and perplex for many years to come.

Conclusion

There is a history in all men's lives,
Figuring the nature of the times deceas'd,
The which observ'd, a man may prophesy,
With a near aim, of the main chance of things

As yet not come to life, which in their seeds
 And weak beginnings lie untreaured.
 William Shakespeare, Henry IV, Part 2

How can careful examination of the history of a disorder be of clinical relevance? A partial answer to this question may reside in the extent to which contemporary medical historians have questioned the seeming lack of clinical attention to the past. As one scholar has suggested, the history of psychiatric diagnosis and treatment is "built upon a foundation of forgetfulness."³

Thus, as one studies the history of mental illness, it is important to be vigilant for repeating patterns of thought, and to the events that have helped to break from these patterns. It is also instructive to note the interplay of history and culture with the shifting conceptualizations of psychiatric disease. In the case of Tourette's Syndrome, there are a number of points worth mentioning.

First, the impact of existing social and cultural beliefs must be addressed. Each period of exploration has depicted the disorder in the context of prevailing world views. The medievalists implicated supernatural etiologies, whereas the Victorians were more concerned with social improprieties and hysteria. Tourette and Charcot briefly entertained neurologic diagnoses, whereas the psychoanalysts conceptualized the disorder as a conflict of unconscious desires. Modern researchers have made great strides in the biological understanding of the disorder but remain committed to the psychosocial effects of the syndrome. In other words, each era has understood Tourette's Syndrome in the context of the most contemporary paradigms. Future progress in understanding the disorder will most likely result from a combination of current appreciation for existing theories and a willingness to break from these theories.

In fact, most changes in the understanding of Tourette's Syndrome have developed from what at the time appeared rather radical positions. The priests in the *Malleus Maleficarum*, for example, were willing to note that the young man with facial grimaces in church did not fit with their usual understanding of persons who were possessed. Similarly, Bouteille suggested the term pseudo-chorea when he felt that twitches and shouts did not conform to his understanding of choreiform disorders. Charcot and Tourette broke from the idea of hysteria, and the psychoanalytic schools addressed the obsessive and seemingly neurotic symptoms of Tourette's Syndrome. The modern era of Tourette's Syndrome began when Arthur Shapiro, an experienced psychotherapist, suggested that his patient with twitches and coprolalia could not be adequately ex-

plained on the basis of neurotic conflicts. Each clinician had the ingenuity and courage to suggest that the existing models were no longer sufficient for the conceptualization of the disorder. Importantly, these clinicians made their assertions in spite of the initial criticisms and protests of their colleagues.

The conceptualization of mental illness is inescapably tied to the culture in which it is viewed. Progress in understanding these illnesses is therefore particularly challenging. In the end, one must balance respect for the achievements of the past with the courage to stand apart.

References

1. McDonald M: *Mystical Bedlam: Madness, Anxiety, and Healing in Seventeenth Century England*. Cambridge, UK, Cambridge University Press, 1981, p 1
2. Marmer SS: Theories of the mind and psychopathology, in Hales RE, Yudofsky SC, Talbott JA (eds): *Textbook of Psychiatry*. Washington, DC, American Psychiatric Press, 1994, p 143
3. Scull A: *Social Order/Mental Disorder: Anglo-American Psychiatry in Historical Perspective*. Berkeley and Los Angeles, CA, University of California Press, 1989, p 8
4. Cohen DJ, Leckman JF: Developmental psychopathology and neurobiology of Tourette's Syndrome. *J Am Acad Child Adolesc Psychiatry* 1994; 33:2-15
5. Apter A, Pauls DL: An epidemiological study of Gilles de la Tourette syndrome in Israel. *Arch Gen Psychiatry* 1993; 50:734-738
6. *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV)*. Washington, DC, American Psychiatric Association, 1994
7. Coffey B, Euripides C: Tourette's disorder and related problems: a review and update. *Harvard Rev Psychiatry* 1994; 2:120-132
8. Goetz CG, Tanner CM: Adult tics in Gilles de la Tourette syndrome: description and risk factors. *Neurology* 1992; 42:784-788
9. Coffey BJ, Park KS: Behavioral and emotional aspects of Tourette's syndrome. *Neurol Clin N Am* 1997; 15:277-288
10. Silva RR, Munoz DM: Environmental factors and related function of symptoms in children and adolescents with Tourette's disorder. *J Child Psychol Psychiatry* 1995; 36:305-312
11. Thibert AL, Day HI: Self-concept and self-consciousness in adults with Tourette syndrome. *Can J Psychiatry* 1995; 40:35-39
12. Staley W, Ward R: Tourette disorder: a cross cultural review. *Compr Psychiatry* 1997; 38:6-16
13. Aterman K: Did Mozart have Tourette's syndrome? Some comments on Mozart's language. *Perspect Biol Med* Winter 1994; 37:247-258
14. Murray TJ: Doctor Samuel Johnson's abnormal movements, in Friedhoff AJ, Chase TN (eds): *Advances in Neurology*, Vol. 35, Gilles de la Tourette. New York, Raven, 1982, pp 25-30
15. Stevens H: Gilles de la Tourette and his syndrome by serendipity. *Am J Psychiatry* 1971; 128:489-492
16. Sprenger J, Kraemer H; Summers M (trans): *Malleus Maleficarum (1489)*. London, UK, Pushkin Press, 1948, pp 130-132
17. Tourette G: Etude sur une affection nerveuse caracterisee par de l'incoordination motrice, accompagnee d'echolalie et de coprolalie. *Arch Neurology (Paris, France)* 1885; 9:158-200
18. Tourette G: Jumping, latah, miryachit. *Arch Neurology (Paris, France)* 1884; 8:68-74

Abstracts

19. Oberndorf CJ: Simple tic mechanism. *JAMA* 1916; 16:99–100
20. Bouetille EM: *Traite de la chorée*. Paris, France, Vineard, 1818
21. Goetz CG, Klawans HL: Gilles de la Tourette on Tourette syndrome, in Friedhoff AJ, Chase TN (eds): *Advances in Neurology*, Vol. 35, Gilles de la Tourette. New York, Raven, 1982, pp 1–16
22. Lajonchere C, Nortz M: Gilles de la Tourette and the discovery of Tourette syndrome. *Arch Neurology* 1996; 53:567–574
23. Itard JMG: *Memoire sur quelques fonctions involontaires des appareils de la locomotion, de l'appréhension et de la voix*. *Arch Gen Med* (Paris, France) 1825; 8:385–407
24. Kushner HI: Medical fictions: the case of the cursing marquise and the (re)construction of Gilles de la Tourette's syndrome. *Bull Hist Med* 1995; 69:224–254
25. Herman JW: *Trauma and Recovery*. New York, Basic Books, 1992, pp 10–12
26. Guilly P: Gilles de la Tourette, in Rose FC, Bynum WF (eds): *Historical Aspects of the Neurosciences*. New York, Raven, 1982, pp 397–413
27. Lees AJ: Georges Gilles de la Tourette, the man and his times. *Rev Neurosci* 1986; 986:808–816
28. Legue G, Tourette G (eds): *Soeur Jeanne des Agnes: Autobiographie d'une hystérique possédée*. Paris, France, Charpentière Cie, 1886
29. Beard GM: Experiments with the "jumpers" or "jumping Frenchmen" of Maine. *J Nerv Ment Dis* 1880; 7:487–490
30. O'Brian HA: Latah. *Journal of the Straits of the British Asiatic Society* 1883; 6:145–158
31. Hammond WA: Miryachit: a newly described disease of the nervous system and its analogues. *N Y Med J* 1884; 39:191–192
32. Guinon G: Tics convulsifs et hystérie. *Revue de médecine* 1887; 7:509–519
33. Guinon G: Sur la maladie des tics convulsifs. *Revue de médecine* 1887; 7:50–80
34. Frankel M, Cummings J, et al: Obsessions and compulsions in Gilles de la Tourette syndrome. *Neurology* 1986; 36:378–382
35. Hunington A: Metals and magnets in medicine: hysteria, hypnosis, and medical culture in Fin de Siecle Paris. *Psychol Med* 1988; 18:21–38
36. Tourette G: La maladie des tics convulsifs. *La Semaine Médicale* 1899; 153–156
37. Shapiro AK, Shapiro ES: *Gilles de la Tourette Syndrome*, 2nd Edition. New York, Raven, 1988, Introduction and pp 1–27
38. Shapiro AK, Shapiro E: Tourette syndrome: history and present status, in Friedhoff AJ, Chase TN (eds): *Advances in Neurology*, Vol. 35, Gilles de la Tourette. New York, Raven, 1982, pp 17–23
39. Freud, S: Pre-psychoanalytic publications and unpublished drafts (1866–1899), in Strachey J (ed): *Complete Psychological Works, Standard Edition, Volume I*. London, UK, Hogarth Press, 1966, pp 124–128
40. Breuer J, Freud S: *Studies in Hysteria*. London, UK, Hogarth Press, 1955, pp 48–105
41. Ferenczi S: Psychoanalytic observations on tics. *Int J Psychoanal* 1921; 2:1–30
42. Abraham K: Contributions to a discussion on tic, in Strachey BD (trans): *Selected Papers of Karl Abraham, MD*. London, UK, London Hogarth Press, 1927, pp 323–325
43. Mahler MS: Tics and impulsions in children: a study in motility. *Psychoanal Q* 1944; 13:430–444
44. Mahler MS, Luke JA: Clinical and follow-up study of the tic syndrome in children. *Am J Orthopsychiatry* 1945; 15:631–647
45. Challas G, Brauer W: Tourette's disease: relief of symptoms with R-1625. *Am J Psychiatry* 1963; 120:283–284
46. Chapel J, Brown: Tourette's disease: symptomatic relief with haloperidol. *Am J Psychiatry* 1964; 121:608–610
47. Shapiro AK, Shapiro E: Treatment of Gilles de la Tourette syndrome with haloperidol. *Br J Psychiatry* 1968; 114:345
48. Shapiro AK: Dangers of premature psychologic diagnoses. *N Y State J Med* 1970; 70:2210–2214
49. Cohen DJ, Deltor J: Interaction of biological and psychological factors in the natural history of Tourette syndrome: a paradigm for childhood neuropsychiatric disorders, in Friedhoff AJ, Chase TN (eds): *Advances in Neurology*, Vol. 35, Gilles de la Tourette. New York, Raven, 1982, pp 31–40
50. Hyde TM, Weinberger DR: Tourette's syndrome: a model neuropsychiatric disorder. *JAMA* 1995; 273:498–501
51. Peterson BS: Considerations of natural history and pathophysiology in the psychopharmacology of Tourette's syndrome. *J Clin Psychiatry* 1996; 57(supp 9):24–34
52. Peterson BS: Neuroimaging and Tourette's syndrome. *Psychopharmacology Conference Series*, Massachusetts General Hospital, Department of Psychiatry, 1997
53. Coffee B (discussant for psychosomatic seminar): Witches and twitches: the conceptualization of Tourette's syndrome. Schlozman SC, Massachusetts General Hospital, Department of Psychiatry, 1997