Patients recently diagnosed with melanoma as well as the physicians who treat them rely on prognostic indicators to help guide therapy and predict long-term outcome. As reviewed last month, research into prognostic indicators continues to improve our understanding of melanoma and the benefits of treatment. However, there are numerous other areas of study related to detection and management of melanoma. Following is a look at a few more highlights from the recent American Society of Clinical Oncology meeting.

**Self-Monitoring Detects Recurrences**
Long-term follow-up of melanoma patients requires frequent follow-up with the dermatologist as well as self-monitoring and frequent skin assessments by the patient. In a slight majority of cases of initial recurrence, patient self-monitoring rather than physician assessment seems to be the best method of detection (Abstract 8057). From a group of 1,062 patients diagnosed and treated for stage I/II melanoma between 1991 and 2004, 211 (20 percent) experienced a total of 242 initial sites of recurrence. Among patients with positive lymph nodes, 47 percent experienced recurrence versus 14 percent of those without. Of the 189 patients evaluable for follow-up, 109 presented with symptoms and self-detected physical findings, whereas physician detection of recurrence was noted in 85 patients. Self-detected physical findings most frequently identified in-transit and nodal disease (13 percent each). Scheduled radiographic tests identified nearly half of the physician-detected recurrences. Abnormal blood tests allowed detection in only two cases.

Multivariate analysis revealed that site of recurrence and method of detection independently predicted post-recurrence survival, with physical findings of local recurrence associated with longest median survival. Following accurate nodal basin staging and management, the authors found, recurrence (if developed) was more likely to be systemic (versus local, in-transit, or nodal).

**Vigilance may be the best defense against the disease, as early detection of both primary melanoma and recurrences is associated with the most favorable outcomes.**

**Costs of Care**
If decreasing morbidity and mortality aren’t enough, there’s apparently another potential benefit to early detection and intervention for melanoma: lower healthcare utilization costs. When researchers (Abstract 18005) reviewed a sample of Medicare claims for a total of 1,465 patients diagnosed with melanoma between 1991 and 2001, they found the average total Medicare cost of care in the first six months after diagnosis was $2,395 per patient. The average six-month cost of care for patients with stage 0-II melanoma (n=1,291) was $1,402 versus $9,756 for those with stage III-IV disease (n=174). Of the total patient population, 98.3 percent underwent a surgical procedure, just over three percent received chemotherapy, 1.2 percent received radiation, 2.3 percent required inpatient treatment, and 1.5 percent had home healthcare. None of the stage 0-II patients underwent chemotherapy or radiation, and only 0.9 percent required in-home care. Among patients with stage III-IV disease, about a quarter of patients received chemotherapy, and just over 10 percent received radiation. Home healthcare was provided to 6.3 percent of these patients.

**Immune Response**
Local and systemic immune suppression are accepted—though perhaps not fully understood—elements of the pathogenesis of melanoma, and researchers increasingly look to immune regulation as a target for experimental melanoma therapies. In efforts to elucidate the
extent of immune suppression in melanoma, researchers attempted to quantify immune suppression in the regional lymph node basins of melanoma patients (Abstract 8000). Lymphocytes were extracted from portions of tumor-uninvolved regional lymph nodes and from macroscopically involved nodes from therapeutic node dissections. Samples were stained using surface and internal antibodies to T-cell receptor zeta (TCR-zeta) chain, T-regulatory (T-regs) cells, and tumor associated myeloid cells. Subsequent analysis via flow cytometry revealed no significant association between T regulatory cell or tumor associated myeloid cells and lymph node involvement. However, there was a 23 percent localized decrease of TCR-zeta expression in the macroscopically involved samples compared to the uninvolved samples, indicating immune suppression.

The zeta chain plays a role in the regulation of TCR/CD3-mediated signal transduction and is attributed with helping maintain cell surface receptor expression and stabilizing TCR residency on the cell surface. Abnormal or diminished TCR-zeta expression is implicated in systemic lupus erythematosus (SLE).

The authors of the current study note that suppression of T-cell receptor zeta in LN samples indicates immune suppression, but the mechanism is uncertain. Findings suggest that this response is not related to T-regs or tumor associated myeloid cell activity. They plan further investigation to determine whether or not immune changes precede macroscopic tumor involvement.

More to Learn
Research into immunology and melanoma continues to improve our understanding of the disease. Future discoveries and ongoing experimentation may lead to improved treatment options. Meanwhile, vigilance may be the best defense against the disease, as early detection of both primary melanoma and recurrences is associated with the most favorable outcomes.