HEM/ONC News

By Stacey Small

Low Levels of Vitamin D Linked to Cancer Progression and Death in Chronic Lymphocytic Leukemia Patients

Vitamin D insufficiency has correlated to inferior prognosis in some cancers. In the November 3 issue of *Blood*, Shanafelt and colleagues reported their findings from an assessment of vitamin D levels in 2 separate cohorts of patients with newly diagnosed chronic lymphocytic leukemia (CLL). They evaluated the relationship of 25(OH)D serum levels with time-to-treatment (TTT) and overall survival (OS) endpoints in a prospective cohort study (discovery cohort) of newly diagnosed CLL patients and an observational study (confirmation cohort) of previously untreated patients. Of the 390 patients enrolled in the discovery cohort, 119 (30.5%) were 25(OH)D insufficient. After a median follow-up of 3 years, the TTT (hazard ratio [HR], 1.66; *P*=.005) and OS (HR, 2.39; *P*=.01) were shorter for 25(OH)D insufficient patients. Of the 153 patients in the confirmation cohort, 61 (39.9%) were 25(OH)D insufficient. The TTT (HR, 1.59; *P*=.05) and OS (HR, 1.63; *P*=.06) were again shorter for 25(OH)D insufficient patients after a median follow-up of 9.9 years. Insufficient 25(OH)D serum levels remained an independent predictor of TTT (HR, 1.47; *P*=.008) in a pooled multivariable analysis of patients in both cohorts. However, the association with OS was not significant (HR, 1.47; *P*=.07). Investigators concluded that vitamin D insufficiency is associated with inferior TTT and OS in patients with CLL, but clinical testing is needed to determine whether normalizing vitamin D levels in deficient CLL patients would improve outcome.

Zoledronic Acid Improves Bone Health and Disease-free Survival in Postmenopausal Women Receiving Adjuvant Letrozole for Early Breast Cancer

Aromatase inhibitors (AI) have increased the adjuvant therapeutic options for postmenopausal women with hormone-responsive early breast cancer (EBC). These agents show superior efficacy as compared with tamoxifen, but they are associated with the loss of bone mineral density (BMD). Eidtmann and coworkers reported their findings from a 36-month follow-up period of the ZO-FAST (Zometa-Femara Adjuvant Synergy Trial) study in the November issue of *Annals of Oncology*. This open-label, multicenter, randomized phase III trial included a total of 1,065 postmenopausal women with EBC who were receiving letrozole (Femara, Novartis; 2.5 mg/day for 5 years). Patients had a BMD T-score greater than -2.0. They were randomized to receive immediate treatment with zoledronic acid (Zometa, Novartis; 4 mg every 6 months) or to receive zoledronic acid if their BMD T-score fell below -2 or if a fragility fracture was present. The mean change in L2–L4 BMD at 36 months was +4.39% for the immediate-treatment group versus -4.9% for the delayed-treatment group (*P*<.0001). Disease-free survival was significantly improved in the immediate-treatment arm compared with the delayed-treatment arm (HR, 0.588; 95% confidence interval, 0.361–0.959; *P*=.0314). At 36 months, the immediate-treatment group had a significant 41% relative risk reduction for disease-free survival events (*P*=.0314). Adverse events were consistent with the known safety profiles of each study drug.

Combination PET/CT Scan Is Highly Predictive of Outcome in Patients With Locally Advanced Head and Neck Cancer Treated With Chemoradiotherapy

At least 50% of patients with squamous cell carcinoma of the head and neck experience relapse following treatment. There are limitations associated with the current assessment guidelines, such as the Response Evaluation Criteria in Solid Tumors (RECIST), which use anatomic imaging techniques such as computed tomography (CT) or magnetic resonance imaging (MRI) to evaluate tumors. The presence of nonpathologic lesions reduces the sensitivity of these measures. As reported in the November issue of *Annals of Oncology*, Passero and associates investigated whether combining CT with positron emission tomography (PET)—which allows for assessment of metabolic activity—could be useful in assessing treatment response and predicting patient outcome. This retrospective study included patients from 5 prospective clinical trials who had previously untreated squamous cell carcinoma of the head and neck, stages III-IVb, and were treated with primary concurrent chemoradiotherapy (CRT). Patients were evaluated by clinical exam and with PET/CT at baseline and approximately 8 weeks after completion of CRT. Of the 53 patients analyzed, complete response (CR) occurred in 42 (79%) assessed by clinical exam, 15 (28%) assessed by CT, and 27 (51%) assessed by PET. When patients were evaluated by PET—but not by clinical exam or CT using RECIST—there was a substantial correlation of CR with progression-free status (*P*<.0001). Similarly, the 2-year progression-free status for patients with CR according to PET was significantly greater than that in patients whose PET scan did not suggest a CR (92.6% vs 47.9%, respectively; *P*=.00002).