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**ZOLEDRONIC ACID SUSTAINS BONE-MINERAL DENSITY DURING
ADJUVANT ENDOCRINE TREATMENT AND IMPROVES BONE-
MINERAL DENSITY 2 YEARS AFTER TREATMENT IN
PREMENOPAUSAL WOMEN WITH EARLY-STAGE BREAST CANCER**

Concomitant zoledronic acid prevents bone loss in women with breast cancer during treatment with adjuvant endocrine therapy, and improves bone-mineral density after treatment, according to findings from a substudy of the Austrian Breast and Colorectal Cancer Study Group trial-12 (ABCSG-12), published early Online and in the September edition of *The Lancet Oncology*.

Adjuvant endocrine therapy is used routinely in patients with endocrine-responsive early breast cancer. However, bone loss associated with this treatment in premenopausal women is of substantial clinical concern. Professor Michael Gnant (Medical University of Vienna, General Hospital of Vienna, Vienna, Austria), and colleagues did a prospective bone-mineral substudy of patients included in the ABCSG-12 trial*, to quantify the long-term effects of endocrine therapy on bone-mineral density and to assess the effects of concomitant zoledronic acid on bone-mineral density.

In the ABCSG-12 trial, premenopausal women were randomly assigned to receive 3 years of either goserelin plus tamoxifen with or without zoledronic acid or goserelin plus anastrozole with or without zoledronic acid. 404 women were prospectively included in the bone substudy, 199 of whom were assigned endocrine therapy alone, and 205 of whom were assigned endocrine therapy with zoledronic acid. Lumbar-spine and trochanter (hip) bone-mineral density was measured by dual-energy X-ray absorptiometry at baseline and at 6, 12, 36, and 60 months in these patients. The primary endpoint of the bone substudy was change in bone-mineral density at 12 months.

After 3 years of treatment, patients who were assigned endocrine therapy alone had significant loss of bone-mineral density at the lumbar spine and trochanter compared with at baseline. At 5 years (2 years after completion of therapy), partial recovery of bone-mineral density was noted, although values were still below baseline. By contrast, in patients who were assigned endocrine therapy and concomitant zoledronic acid, bone-mineral density remained stable at 3 years at both sites, and increased at 5 years above baseline values.

This substudy shows that the addition of zoledronic acid to routine endocrine therapy in premenopausal women with early-stage breast cancer can sustain bone-mineral density during 3 years of endocrine therapy and actually improve bone-mineral density 2 years after completion of therapy. Prof Gnant says: "The findings presented here offer important information related to bone health for premenopausal women undergoing adjuvant endocrine therapy".

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Notes for Editors:

*The ABCSG-12 trial is a randomised, open-label, phase III, 4-arm trial to assess the clinical efficacy of goserelin-induced ovarian suppression plus tamoxifen or anastrozole, with or without zoledronic acid in 1803 premenopausal women with early-stage breast cancer.