Results mixed for twice-daily APBI in early breast cancer

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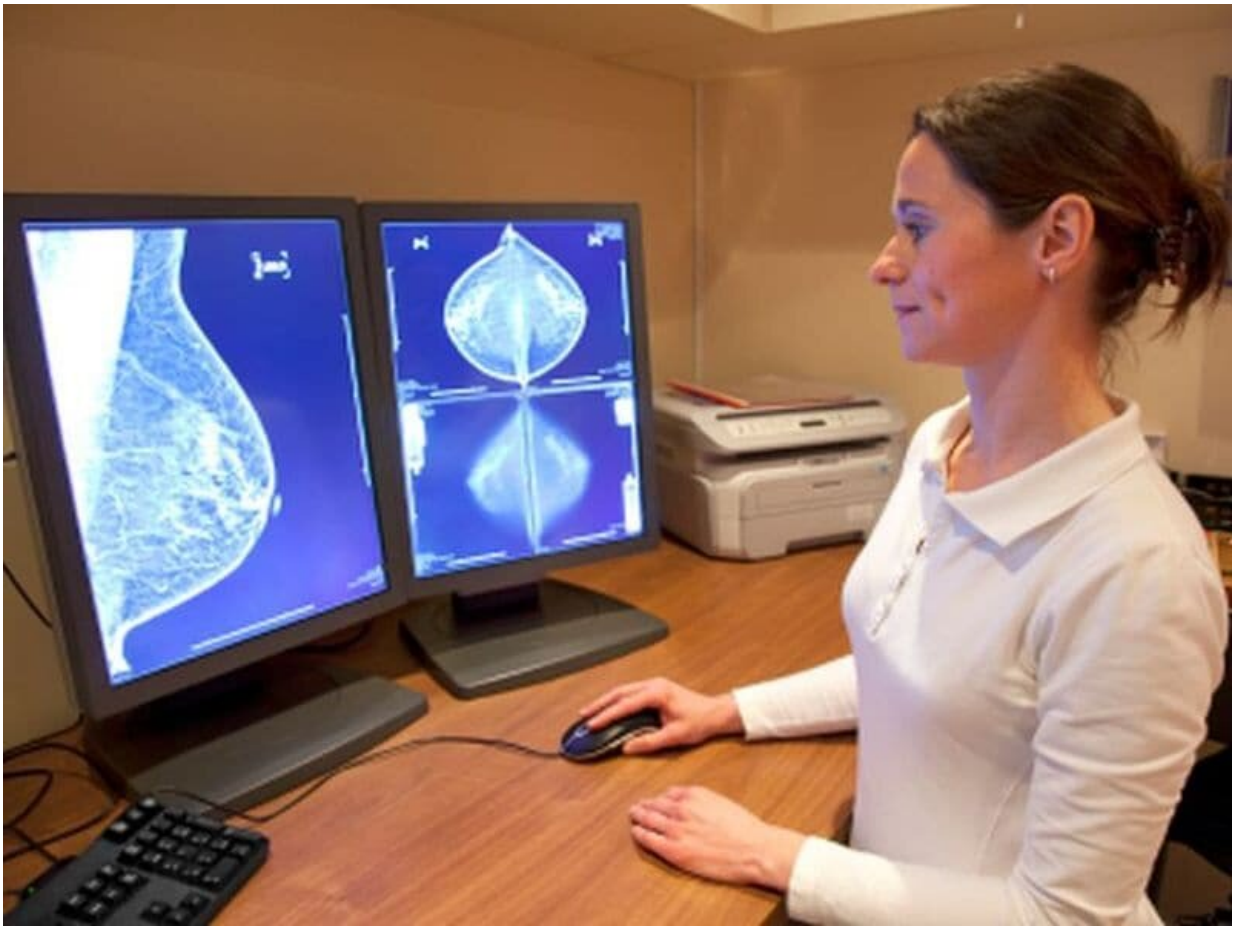

(HealthDay)—Accelerated partial breast irradiation (APBI) delivered

twice per day over one week to the tumor bed is noninferior to whole breast irradiation for preventing ipsilateral breast tumor recurrence (IBTR), but moderate late radiation toxicity and adverse cosmesis were more common with this regimen, according to a study published online Dec. 5 in *The Lancet*.

Timothy J. Whelan, B.M., B.Ch., from McMaster University and Juravinski Cancer Centre in Hamilton, Canada, and colleagues conducted a multicenter, randomized, noninferiority trial (RAPID) in 33 cancer centers in Canada, Australia, and New Zealand. A total of 2,135 women with ductal carcinoma in situ or node-negative breast cancer treated with breast-conserving surgery were randomly assigned to either external beam APBI (38.5 Gy in 10 fractions delivered twice per day over five to eight days; 1,070 women) or whole breast irradiation (42.5 Gy in 16 fractions once per day over 21 days or 50.0 Gy in 25 fractions once per day over 35 days; 1,065 women).

The researchers found that the eight-year cumulative rates of IBTR were 3.0 percent (95 percent confidence interval [CI], 1.9 to 4.0) and 2.8 percent (95 percent CI, 1.8 to 3.9) in the APBI and whole breast irradiation groups, respectively. For APBI versus whole breast irradiation, the hazard ratio was 1.27 (90 percent CI, 0.84 to 1.91). Patients treated with APBI less often had grade two or higher acute radiation toxicity (28 versus 45 percent) but more frequently had grade two or higher late radiation toxicity (32 versus 13 percent). At three, five, and seven years, adverse cosmesis was more common in patients treated with APBI (absolute differences, 11.3 percent [95 percent CI, 7.5 to 15.0], 16.5 percent [95 percent CI, 12.5 to 20.4], and 17.7 percent [95 percent CI, 12.9 to 22.3], respectively).

"Our results show that although the APBI regimen in RAPID was noninferior to whole breast irradiation in terms of local recurrence, it was associated with increased late toxicity and adverse cosmesis," the

authors write. "Hence, we are not able to recommend the twice per day regimen used in RAPID for routine clinical practice."

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