

Additional, specialized radiation not necessary for some women after mastectomy

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After mastectomy, breast cancer patients who receive radiation treatment to the lymph nodes located behind the breast bone do not live longer than those who do not receive radiation to this hard-to-treat area, according to a randomized 10-year study presented at the plenary session, November 2, 2009, at the 51st Annual Meeting of the American Society for Radiation Oncology (ASTRO).

Breast cancer that is located in an internal, central location in the breast area, and larger tumors that have spread to the lymph nodes located under the arm (axillary) and just above the collar bone (supraclavicular), are more likely to spread to the internal mammary lymph nodes that are located behind the breast bone.

The type of external beam radiation treatment used to treat these patients is called internal mammary chain radiation treatment, or IMC-RT. It is challenging to deliver the proper dose of radiation to the internal mammary chain because it is hard to define its exact location and to protect critical organs, such as the heart and lung.

"This is the first study that answers the important question of whether radiation to the internal mammary chain lymph nodes benefit these patients after 10 years of follow-up," Pascale Romestaing, M.D., lead author of the study and a radiation oncologist at Centre de Radiothérapie Mermoz in Lyon, France said. "Our findings clearly show that it does not affect overall survival. These women still need radiation treatments - just not additional radiation to these specialized cells."

During external beam radiation therapy, a beam (or multiple beams) of radiation is directed through the skin to the cancer and the immediate surrounding area in order to destroy the main tumor and any nearby cancer cells. The treatments are outpatient and generally painless, much like receiving an X-ray.

The multicenter randomized trial involved 1,334 women newly-diagnosed with stage 1 or 2 [breast cancer](#) who had undergone a [mastectomy](#), or surgery to remove a breast. Patients had either cancer that had spread to the axillary lymph nodes or their original tumor was in an internal, central location in the breast area. While all patients received radiation to the chest wall and supraclavicular lymph nodes, one-half of the patients were randomized to also receive the specialized IMC radiation treatment.

After 10 years, researchers found no significant differences in survival rates between the group who received IMC radiation treatment (63 percent) and those who did not (60 percent). The study also found no differences in survival for patients in the study who were analyzed in subgroups. These groups included whether or not their cancer had spread to their [lymph nodes](#), where their original tumor was located, and whether they also underwent chemotherapy or hormone therapy at the same time they had radiation treatment.

Source: American Society for Radiation Oncology

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