

DERMATOLOGIC TOXICITIES ASSOCIATED WITH RADIATION THERAPY IN WOMEN WITH BREAST CANCER

Women receiving radiation therapy frequently experience dermatologic adverse effects.

Radiation therapy is an important treatment for many women with breast cancer and may result in numerous skin changes during therapy, or even after completion of treatment. These adverse effects can significantly impact women's quality of life. Timely diagnosis and management by dermatologists, radiation oncologists and oncologists is important in the overall care of women with breast cancer.

Radiation Dermatitis

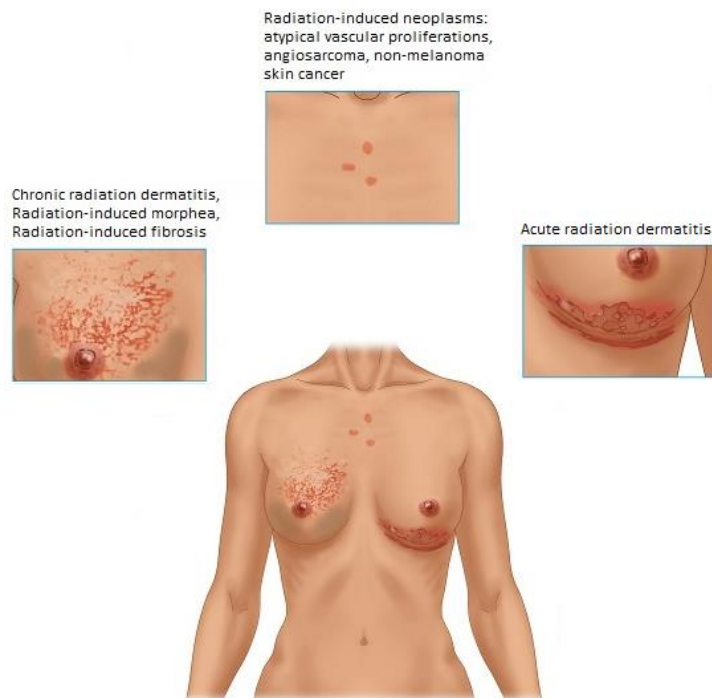
Radiation dermatitis is the most common adverse effect of radiation therapy and is observed in 90% of breast cancer patients who receive radiation therapy. Acute radiation dermatitis may first appear hours after radiation exposure as a faint pink rash. The severity of the rash increases with higher cumulative doses of radiation: a dry, red, flaking rash may appear a few weeks into treatment and in severe cases the rash may become moist and blisters may develop. It is important for patients to minimize friction and unnecessary trauma at the radiation site by wearing loose-fitting clothing, protecting the area with bland emollients, and avoiding direct exposure to sunlight, extreme temperatures, and irritating skincare products. In addition, applying topical corticosteroids daily during radiation therapy reduces the severity of acute radiation dermatitis. Most cases of acute radiation dermatitis resolve after treatment is completed.

In contrast, chronic radiation dermatitis typically presents several months after the completion of radiation therapy due to skin and blood vessel injury. Chronic radiation dermatitis includes hypo- or hyperpigmentation within the radiation field, dilation of small blood vessels (telangiectasias), and skin thinning.

Radiation-Induced Morphea and Fibrosis

Radiation-induced morphea and fibrosis are both characterized by thickening and hardening of the skin. Radiation-induced morphea has an abrupt onset months to years after breast radiation. It first appears as a single round, inflamed plaque and later progresses to darker discoloration and sometimes hardening of skin. If diagnosed early, radiation-induced morphea can be treated with anti-inflammatory agents.

Radiation-induced fibrosis arises more gradually within the first several months following radiation therapy with skin hardening at the radiation site and may advance to breast contracture. Treatment options primarily involve physical therapy and mechanical massage techniques to reduce pain and improve range of motion.



Atypical Vascular Lesions and Skin Cancers

Post-radiation atypical vascular lesions (AVLs) are small red to blue lesions on the chest wall that can present 3-4 years after breast cancer radiation. While AVLs are benign, a small proportion of AVLs may progress to malignant angiosarcomas, which have poor prognosis. As a result, any concerning or growing lesions in the radiation site should be promptly evaluated and biopsy may be recommended by your dermatologist. Radiation therapy also increases the risk of developing non-melanoma skin cancers (basal cell carcinoma and squamous cell carcinoma). On average, non-melanoma skin cancers present 20 years after radiation therapy and can be treated with Mohs micrographic surgery. Routine total body skin exams are critical for early detection and treatment of atypical vascular lesions and radiation-induced skin cancers.

FOR MORE INFORMATION

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