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28619 – MALIGNANT TUMOR OF THE PERIPHERAL NERVE SHEATH INDUCED AFTER RADIOTHERAPY FOR BREAST CANCER: A CASE REPORT AND THERAPEUTIC APPROACH

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Introduction: We present the case of patient I.R., a 69-year-old woman, who was diagnosed with invasive ductal carcinoma of the breast in June 2014. She underwent breast-conserving surgery, radiotherapy, and hormone therapy. After nine years, magnetic resonance imaging revealed a mass in the thoracoabdominal region. Subsequent examinations identified a solid nodule in the right breast. A biopsy diagnosed a spindle cell neoplasm. In June 2023, she underwent a right mastectomy with chest wall reconstruction. The pathological examination revealed a malignant tumor of the peripheral nerve sheath induced after radiotherapy for breast carcinoma. The patient is currently in regular follow-up. This case report highlights the rarity of malignant tumor of the peripheral nerve sheath induced after radiotherapy and emphasizes the importance of proper histopathological evaluation, immunohistochemistry, and DNA methylation profiling (MethylSarc) for an accurate diagnosis. Additionally, we describe the therapeutic approach used, which involved radical mastectomy with breast reconstruction. Further studies are needed to better understand this rare entity and to evaluate the effectiveness of the available treatment options. **Methodology:** Case report and literature review. **Conclusion:** Further studies are required to better understand this rare entity and to evaluate the most effective therapeutic options available. The advent of new targeted chemotherapy agents may soon provide options for neoadjuvant therapy in locally advanced cases, adjuvant therapy in high-risk recurrence cases, and palliative treatment for metastatic disease.