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“Oligometastatic (OGM) Disease: An Emerging Concept In Oncology”

A 46-year old presented with pain in her right axilla. Medical history was significant for stage II triple negative breast cancer (TNBC) diagnosed in 2008 treated with surgery (SRG), radiation (XRT) and chemotherapy (CTX). In 2014 she had a recurrence in the axilla treated with SRG and CTX. In 2016 she was found to have a chest wall recurrence treated with CTX and XRT. In 2018 she had a new unresectable chest wall recurrence and due to prior XRT she was considered to be at high risk for tissue necrosis with additional treatment. She was then treated with chest wall cryoablation (CAB) x 2 with resolution of her symptoms. Pain remained under control for 8 months.

Metastatic TNBC (mTNBC) is considered an incurable disease. CTX represents the cornerstone of treatment and the goals are to improve survival and palliate symptoms. Median survival (MS) for mTNBC is only 2 years. Second line CTX has modest activity with response rate of < 20%, rare complete responses and time to tumor progression < than 6 months. XRT and SRG are reserved for management of symptomatic or non-responsive disease. In 1995 Helman proposed the concept of OGM cancer, in which some recurrent tumors remain locoregionally confined, others are disseminated, and others progress from locoregionally confined to metastatic. However, it was not until recently that this concept has taken more relevance. It has been reported that oligo- and poly- metastases are distinct entities at both the clinical and molecular level by analyzing RNA expression patterns from lung and liver metastases. OGM tumors may benefit from locoregional therapies. Options include stereotactic body radiation (SBRT), minimally invasive SRG and ablation. Tumor ablation may be achieved by applying heat (radiofrequency, microwave and laser), or by the use of CAB systems which cool tissue to less than -40°C and cause tissue necrosis. CAB can be used in the treatment of renal masses, hepatic tumors, bone lesions, lung, prostate and breast tumors.

Emerging clinical data supports the addition of locoregional therapies in patients with OGM cancer. The recently published SABR-COMET phase II randomized trial reported a MS of 28 months for systemic therapy alone compared to 41 months with the addition of SBRT. Currently NRG is conducting a phase II/III trial in newly diagnosed OGM breast cancer.

Our patient is an example of OGM TNBC who remains alive 6 years after developing metastatic disease. The use of local therapies has probably contributed to her survival. This case also exemplifies the value of CAB in treating recurrent tumors, particularly when other techniques, such as SRG or XRT are not appropriate.