



## Loco-regional therapy for metastatic breast cancer

Curative treatment is not possible for most patients with metastatic breast cancer (MBC) because cancer cells have spread throughout the body (1). The main treatment aims are to ‘prolong survival and palliate symptoms’. Systemic therapy can achieve these aims by reducing and suppressing tumor growth. Hormone therapy, chemotherapy and molecular targeted agents are administered, according to their predicted efficacies, as systemic treatments. Recently, immune check point blockade agents (ICI) have been shown to prolong the survival of patients with triple negative breast cancer (2), which has a poorer prognosis than other breast cancer subtypes and is resistant to standard systemic treatments. Patients with MBC can survive longer without metastatic symptoms when treated with these systemic therapies. However, MBC cannot be cured with ICI or other treatments and the majority of MBC patients will die of their disease. It is important to use all available treatments to obtain maximal control of symptoms, prevent serious complications, and prolong life with minimal disruption of daily activities and quality of life (3). We endeavor to use fewer powerful drugs, such as hormone therapy and oral agents, and thereby minimize severe adverse events.

Loco-regional therapy including surgery, radiation and interventional radiotherapy are useful for preventing local symptoms caused by tumors. However, definitive evidence that loco-regional therapy for MBC can prolong the survival is, as yet, lacking (4). Loco-regional therapies have been regarded as intensive treatment associated with several complications. Thus, we did not aggressively use loco-regional therapies for MBC patients without symptoms. At present, we can administer loco-regional therapy safely and to a limited extent, and still achieve meaningful clinical improvements.

In addition, there have been remarkable advances in diagnostic imaging examinations. We can now detect extremely small metastases that previously could not be visualized employing traditional imaging modalities (5).

‘Oligometastasis’ is a concept that is currently being debated (6). According to this concept, even distant metastases, depending on their location and number, can potentially be cured with an aggressive treatment strategy including loco-regional therapy. If we use the most advanced imaging examinations available as intensive follow-up, we can detect more oligometastases. Currently, intensive routine radiographic investigations for distant metastasis in asymptomatic patients are not recommended, because data supporting prognostic benefits are lacking (7). We need to re-evaluate the data regarding the effectiveness of modern loco-regional therapy for oligometastatic disease. Improved treatment for oligometastases is anticipated to advance the total treatment strategy for MBC.

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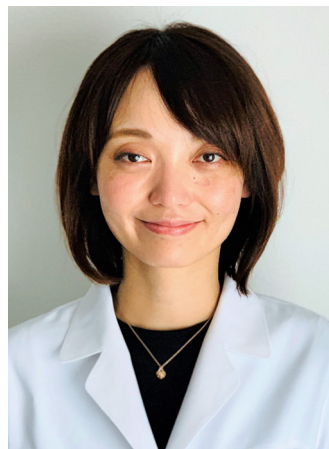
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