9/23 (Sat.) 11:15-11:30

**Management of Ipsilateral Local Recurrence: Radiation Oncology View**

Chin-Nan Chu, M.D., Ph. D.

This abstract explores the advantages of whole breast radiotherapy, the emerging use of hypofractionated whole breast radiotherapy, the associated side effects, and the latest advancements in accelerated partial breast irradiation (APBI) techniques such as the US FAST trial and intraoperative radiation therapy (IORT).

Whole breast radiotherapy has been established as a standard treatment for local recurrence. By delivering radiation to the entire affected breast, including the tumor bed and surrounding tissues, whole breast radiotherapy ensures comprehensive treatment coverage. It has proven to effectively reduce the risk of recurrence and improve long-term survival rates. The advantages of whole breast radiotherapy lie in its ability to target potential microscopic disease spread, leading to better local control.

Hypofractionated whole breast radiotherapy is an emerging approach that delivers higher doses of radiation in fewer fractions over a shorter treatment period. Recent studies have shown comparable clinical outcomes with hypofractionation compared to conventional fractionation, making it a more convenient and cost-effective option for patients. The shorter treatment duration reduces the burden on patients and healthcare resources without compromising treatment efficacy.

When considering radiation therapy, it is important to address potential side effects. Acute side effects may include skin reactions, breast pain, and fatigue, while long-term side effects can involve breast fibrosis and changes in breast appearance. Advanced radiation techniques, such as intensity-modulated radiation therapy (IMRT) and proton therapy, help minimize these side effects and improve treatment outcomes.

Accelerated partial breast irradiation (APBI) techniques have gained attention as alternative approaches to whole breast radiotherapy. The US FAST trial has demonstrated the efficacy and safety of APBI in selected patients with low-risk breast cancer, offering a shorter treatment course with comparable outcomes. Intraoperative radiation therapy (IORT) is another emerging technique that delivers a single high dose of radiation during surgery, reducing treatment duration and sparing healthy tissues.

In conclusion, the management of ipsilateral local recurrence in breast cancer requires a tailored approach, and radiation oncology offers various options. Whole breast radiotherapy provides comprehensive treatment coverage, while hypofractionated regimens offer convenience and cost-effectiveness. Advances in APBI techniques, such as the US FAST trial and IORT, provide alternatives to whole breast radiotherapy. By considering potential side effects and incorporating advanced radiation techniques, radiation oncologists can optimize treatment outcomes for patients with ipsilateral local recurrence.