

Early Breast Cancer Therapy Advancements: Pegylated Liposomal Doxorubicin as a Viable Option

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As we know, in addition to surgery and radiation therapy, high proportion of early breast cancer patients need systemic treatment such as chemotherapy, hormone, targeted and immunotherapy to prevent tumor recurrence and increase patient survival. Applying systemic treatment ahead of surgical removal of the tumor, which called neo-adjuvant therapy, could increase the opportunity for breast breast-conserving surgery and decrease the need of radical axillary dissection. Oppositely, adjuvant therapy is systemic treatment given after surgery to destroy any remaining cancer cells and reduce the risk of cancer recurrence.

According to the latest data from Health Promotion Administration, Ministry of Health and Welfare, over 56% newly diagnosed early breast cancer patients received chemotherapy. Among all chemo-agents, Anthracycline- and taxane-based chemotherapy are key regimens for early breast cancer patients. Although both are effective anti-tumor agents, they are related to a burden of acute toxicities which lead to treatment delay, reduction, and interruption. Besides, these chemo-agents also cause long-term side effects. For example, anthracycline anticancer agent such as doxorubicin and epirubicin will induced heart failure which can be life-threatening.

To diminish chemotherapy-related toxicity but maintaining antitumor efficacy, new chemotherapy such as pegylated liposomal doxorubicin (PLD) which was proven reduces doxorubicin cardiotoxicity could be a potential treatment option for early breast cancer.

This year the outcomes of two clinical trials in Taiwan regarding PLD in early breast cancer treatment have been released: One study is PLD for neo-adjuvant therapy, the other is PLD for adjuvant therapy. Speaking of the result of the former study, there were significant more patients achieved pCR under PLD-based than Epirubicin-based treatment, especially in the triple-negative and HER2-positive subtype. On the other hand, the outcomes of the latter trial showed that PLD-based regimen demonstrated similar survival benefit to Epirubicin-based treatment but significant less side effects regarding alopecia, vomiting and fatigue.

All in all, these two studies demonstrated that PLD is efficacious and tolerable treatment in early breast cancer for Taiwanese patients.