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Advances in combination chemotherapy in metastatic breast cancer

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Metastatic breast cancer is a major health problem. The prognosis for patients with advanced disease is guarded; patients diagnosed between 1995 and 1998 had a 5-year survival rate of 20% [1]. Besides treatments using hormonal therapy, or established chemotherapeutic drugs, novel chemotherapeutic agents that may improve survival are becoming available.

Trials of new chemotherapy combinations and targeted biological agents have provided impressive efficacy results with limited increases in toxicity. This supplement to the *European Journal of Cancer* reports some of the latest experimental data on new chemotherapy combinations and discusses the place of combination therapy in the treatment of metastatic breast cancer.

In their article, Drs Modi and Seidman highlight the current controversies that surround the choice of combination versus sequential single-agent chemotherapy for the treatment of advanced breast cancer [2]. Although single-agent therapy is traditionally favoured by some investigators, the authors review how the role of combination chemotherapy in the advanced setting is evolving. New combinations of chemotherapies (such as gemcitabine plus paclitaxel) or combinations of chemotherapy and biological agents (such as bevacizumab and trastuzumab) have shown promising results in experimental settings in recently reported, well conducted trials. The authors conclude that combination and sequential therapy may both have their place in the treatment of metastatic breast cancer and that the heterogeneity of the disease dictates that there should be flexibility in the treatment approach.

Dr Colomer provides a comprehensive review of the use of taxane combinations in the treatment of metastatic breast cancer [3]. Dr Colomer reviews efficacy and toxicity data from Phase II and Phase III trials of gemcitabine/taxane combinations such as gemcitabine plus paclitaxel, which has been approved by the European Medicines Agency and the United States Food and Drug Administration for use in first-line advanced stage patients after failure or anthracycline-containing adjuvant therapy.

In his article, Dr Chan presents preliminary results of a European Phase III trial that compares gemcitabine plus docetaxel with capecitabine plus docetaxel as first- or second-line treatment for anthracycline-pretreated metastatic breast cancer or locally advanced breast cancer [4]. Similar efficacy was seen in the two treatment arms; however, gemcitabine plus docetaxel, was found to be superior to capecitabine plus docetaxel in terms of the number of serious adverse events and levels of toxicity. There were two deaths due to toxicity in the capecitabine plus docetaxel arm and serious adverse events led to discontinuation in 28% of the patients.

This supplement aims to provide the reader with a comprehensive overview of the current treatment options available for metastatic breast cancer and of the regimens that are undergoing testing, as well as highlight key unanswered questions. The consensus favours an individualised treatment approach with a focus on the many evolving treatment areas.

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