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Drug combination shrinks secondary brain tumours in breast cancer without substantial side effects of radiotherapy

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The sizeable and increasing proportion of women with advanced breast cancer whose disease has spread to the brain could be effectively treated systemically with a combination of two drugs, sparing them the debilitating neurological side effects of whole brain radiotherapy, suggests new research published Online First in *The Lancet Oncology*.

The phase 2 LANDSCAPE study reports that the combination of lapatinib and capecitabine had similar response rates to WBRT, shrinking brain tumours by at least 50% in two-thirds of women with advanced HER2-positive breast cancer, with a fifth of patients experiencing at least 80% reduction in tumour size, but with manageable side effects.

"As women live longer with advanced cancer the occurrence of brain metastases is becoming increasingly common. Currently, 20% to 30% of women with advanced breast cancer develop secondary brain tumours. Those with HER2-positive disease seem to be most at risk, with up to half developing brain metastases", explains Thomas Bachelot from the Centre Léon Bérard in Lyon, France, who led the research. "Traditionally, most of these women receive WBRT which can impair cognitive function. Delaying such a treatment for those patients is potentially a big advance."

The study, conducted by the French cooperative group UNICANCER,

assessed 45 patients all with previously untreated brain metastases from HER2-positive breast cancer, who were treated with a daily combination of lapatinib and capecitabine.

Overall, 37 patients (84%) experienced some reduction in brain tumour size from the start of the study. Tumours shrank by 50% or more in 29 women (66%) and by at least 80% in nine patients (20%).

Side effects with the combination therapy were predictable and manageable. About half of patients experienced at least one grade 3 or 4 side effect, the most common being diarrhoea and hand-foot syndrome, leading to treatment discontinuation in four women.

"Median time to WBRT was 8.3 months, which is particularly relevant for a population with short overall survival, and could help delay the substantial toxicities of radiotherapy", says Bachelot, adding that "This strategy deserves further evaluation to confirm the clinical benefits in terms of survival, cognitive function, and quality of life."

Writing in a linked Comment, Rupert Bartsch and Matthias Preusser from the Medical University of Vienna in Austria suggest that these findings might already be sufficient to begin treating some women in this fashion, sparing them from radiotherapy, "For patients with multiple brain metastases from HER2-positive breast cancer presenting with minimal clinical symptoms and good performance status, primary systemic treatment containing lapatinib and capecitabine might already be a valid treatment option."

More information: www.thelancet.com/journals/lan … (12)70432-1/abstract

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