Obesity as an independent risk factor for decreased survival in node-positive high-risk breast cancer.

Abstract:
Obese breast cancer patients have a higher risk of lymph node metastasis and a poorer prognosis compared to patients with normal weight. For obese women with node-positive breast cancer, an association between body weight and prognosis remains unclear. In this retrospective study, we analyzed patient data from the Phase-III ADEBAR trial, in which high-risk breast cancer patients (pT1-4, pN2-3, pM0) were randomized into a docetaxel-based versus epirubicin-based chemotherapy regimen. Patients were grouped according to their BMI value as underweight/normal weight (BMI= 30 kg/m²; n = 285). Overweight and obese patients were older, had larger tumors and were more likely to be postmenopausal at the time of diagnosis compared to underweight/normal-weight patients (all p< 0.001). Multivariate Cox regression analyses adjusting for age and histopathological tumor features showed that obese patients had a significantly shorter disease-free survival (DFS; HR 1.43; 95 % CI 1.11-1.86; p = 0.006) and overall survival (OS; HR 1.56; 95 % CI 1.14-2.14; p = 0.006) than non-obese patients. Subgroup analyses revealed that the differences in DFS and OS were significant for postmenopausal but not for premenopausal patients, and that the survival benefit of non-obese patients was more
pronounced in women with hormone-receptor-positive disease. Obesity constitutes an independent, adverse prognostic factor in high-risk node-positive breast cancer patients, in particular for postmenopausal women and women with hormone-receptor-positive disease.