

## **Fifteen-year trends in metastatic breast cancer survival in Greece.**

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### **Source**

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### **Abstract**

In the metastatic setting, a detected time trend to improved prognosis could be attributed to the corresponding recent advances in the therapeutic approaches. The aim of the current study was to first assess, in a large cohort of well over a thousand patients, the time trends in survival in MBC for the last 15 years and second to explore its association to prognostic factors affecting outcome including therapeutic regimen. This meta-analysis uses individual patient data collected from all the trials on MBC (6 nonrandomized, 4 randomized) conducted by HeCOG from 1991 through 2006. Four 4-year time periods (1991-1994, 1995-1998, 1999-2002, and 2003-2006) were constructed for exploration of time trends in survival according to the patient's date of metastatic diagnosis. Different first line regimens in the 10 trials include anthracycline monotherapy (epirubicin, in the early 1990s) and taxane containing regimens either as monotherapy or in different combinations with anthracyclines or other drugs. In two phase II studies and in the last randomized study, trastuzumab was administered in all the patients with HER2 overexpressing tumors. In this study, information is based on a total of 1361 patients with a median follow up of 3.7 years and median survival of 1.9 years (median survival 1.28, 1.68, 2.20, and 2.57 years for 1991-1994, 1995-1998, 1999-2002, and 2003-2006, respectively). Survival improved significantly across diagnosis time periods, by 25, 44, and 51%, respectively, in each time period (1995-1998: HR = 0.75, P = 0.004; 1999-2002: HR = 0.56, P<0.001; 2003-2006: HR = 0.49, P<0.001) as compared to the first time period (1991-1994). The effect of metastatic diagnosis time period remains almost unchanged in the presence of the following significant prognostic factors: performance status, hormonal receptor status, previous adjuvant chemotherapy, previous adjuvant hormonal treatment, visceral metastasis at entry, and number of metastatic sites. When exploring the effect of new systemic treatment introduction, taking into account the same significant prognostic factors, the effect of diagnosis time period disappears, and the survival improvement is explained directly by the introduction of new agents (hormonal treatment for metastatic disease: yes vs. no: HR = 0.72, P<0.001; taxanes at first line: yes vs. no: HR = 0.69, P = 0.002; trastuzumab at first line: yes vs. no: HR = 0.63, P<0.001). The results of this study provide significant evidence of improvement in prognosis of MBC patients within the last 15 years, taking into account all the important significant prognostic factors, and this improvement can be attributed to the use of new systemic treatment agents in the management of the disease.