High cancer detection risk in women with a false positive result in breast cancer screening in Spain

Introduction Breast screening reduces mortality from breast cancer through early detection. Despite its benefits, breast cancer screening presents some adverse effects, as false positive (FP) results. Our aim was to estimate the risk of cancer detection associated to have experienced a previous FP mammography.

Methods The Cumulative False Positive Risk study includes eight population-based screening programs in Spain, between 1990 and 2006, that invites women aged between 45-50 and 69 years, with no previous breast cancer. We included women participating in at least one previous screening (radiologic unit, reading method and number of mammograms). We considered a FP result if, after further assessments, breast cancer was not diagnosed. Cancer detection risk was estimated through OR (1000 mammograms vs 2.56 per 1000 mammograms). The adjusted OR of cancer detection was higher in women with a FP in any previous screening (OR=1.98 95% CI 1.76 to 2.00).

Conclusion Women with a previous FP result had a higher risk of cancer detection. This result may suggest that factors related to FP could provide useful information to redesign different early detection strategies for specific subgroups of women.