

Predictive value of combined criteria to tailor breast cancer screening and new opportunities from circulating markers. The Andromeda study.

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Background

In the last years growing interest has been posed on alternative ways to screen women for breast cancer (BC) involving different techniques or modulating screening intensity by BC risk. The study's objective is to estimate the predictive positive values for BC of model-based estimates of absolute risk, breast density, and life-style in the same individuals of a large perspective cohort of women attending BC screening. The research aims also to evaluate the accuracy of selected circulating microRNAs in an appropriately defined case-control study.

Methods

Women aged 45-67 years and participating to BC screening in Piedmont-Italy are enrolled in Andromeda. At enrolment, information on BC risk factors and life-style are collected through a short standard risk questionnaire (SRQ) together with breast density. Women are also asked to fill in a detailed questionnaire on their life-styles (LSQ) and to provide a blood sample for serum, plasma and buffy-coat storing. A nested case-control study will be drawn as soon as the outcome status will be ascertained for about 230 cases. Molecular analysis to evaluate SNIPs and circulating miRNAs will be performed.

Interim results

In the first year among 25653 screened women 12244 (53%) agreed to participate. For all we collected basic information through the SRQ. 6064 women (50%) agreed also to fill in the LSQ. To date, 4131 women provided a blood sample and more than 1000 are on the waiting list. The enrollment is in progress. Analysis on anthropometric and life-style characteristics are underway and available in the coming months.

Conclusion

The results obtained so far are encouraging about the feasibility of this intervention. The good acceptance of women is a precondition to achieving the ambitious study's objectives. More in-depth analysis on life-style habits and BC risk factors will add further details in the definition of the risk prediction model.