Author's response to reviews

Title: Prognosis of screen-detected breast cancers: results of a population based study

Authors:

Laura Cortesi (hbc@unimo.it)
Vincenzo E Chiuri (chiuriv@unimore.it)
Silvia Ruscelli (silvia_ruscelli@hotmail.it)
Valeria Bellelli (v.bellelli@ausl.mo.it)
Rossella Negri (r.negri@ausl.mo.it)
Ivan Rashid (rashid.ivan@policlinico.mo.it)
Claudia Cirilli (cirilli.claudia@policlinico.mo.it)
Ennio Gallo (gallo.ennio@unimo.it)
Massimo Federico (federico@unimore.it)

Version: 3  Date: 28 September 2005

Author's response to reviews: see over
**Reply to Reviewer 1:**

1. (Minor essential revision). As requested we have modified the abbreviation SMP with MSP (mammography screening program). The meaning is defined in the BACKGROUND of the ABSTRACT

2. (Discretionary revisions). According to the reviewer we have modified the conclusions in the ABSTRACT, undelying that 5 year overall survival and event free survival reflect the good quality assurance parameters of the MSP and not the decreased mortality rate

**Reply to Reviewer 2:**

1. (Major compulsory revision). In the METHODS we have specified the number of healthy population aged 50-69 years, in the Modena province. Furthermore in the aim of clarifying which part of women represented the non-screen detected cases, we have reported the number of women (337). already affected by breast cancer before the first invitation.

2. In the RESULTS we reported the detection rate at the different rounds. As expected by the reviewer, the number of prevalent cases was high (428) making the lead-time and length biases suspectable. In an effort to limit the effects of these biases we analyzed the differences in follow-up duration between the two groups within each stage. Next, we subtracted the stage-specific difference from the follow-up time in screen detected group. After this adjusting, the overall survival in screen detected group (OS = 94. %) remains statistically better than the non-screen detected group ( OS = 84. %; p < 0.0001).

3. In the BACKGROUND session we added some references justifying the value of short-term outcome as intermediate indicator of effectiveness of early diagnosis

4. As requested we provided adequate information on the detection rate of the program and the risk of false-positive outcome (recall rate).

5. Details on the few patients lost to follow-up have been reported, confirming the almost complete availability of follow-up data.

6. Respect to a possible class bias, unfortunately we do not have any direct data on social class status of population invited by the MSP. However we included some information obtained from women participants to a cervical screening program in the same geographically area.

**Replay to Reviewer 3:**

1. As already pointed out in replay to reviewer 2, we have modified the BACKGROUND session according to the reviewer suggestions.

2. See comments on the same question of reviewer 2
3. As requested by the reviewer we have provided additional information on patients excluded by the screening for a recent previous mammogram (56) plus the number of cancers arisen in women who had refused to participate to the MSP (78).

4. We have accepted the suggestion on definition of sensitivity and we modified the DISCUSSION accordingly.

Replay to Reviewer 4:

1. The comments of the reviewer are very detailed and pertinent. We modified the fourth sentence of the BACKGROUND according to the suggestion.

2. We have modified the last paragraph of the BACKGROUND introducing the description women "exposed to screening" as suggested by the reviewer. Also Table 2 has been modified as above. Finally Table 2 was corrected.

3. With respect the using a more modern size description for the classification of the tumours, although we agree with the comment we were not able to modify the statistical analysis. However we believe that our study maintain its validity also in the present form.

4. We have explained the discrepancy between the total number of screen-detected and non screen-detected cancers and the cases which have been followed up in the RESULTS (SURVIVAL DATA).

5. We have clarified the meaning of the word "Dead" in the SURVIVAL DATA sessione and Tab.4.

6. See comments on the same question of reviewers 2 and 3.

7. We have accepted all the suggestions and we have modified text and tables. Particularly, we have confirmed with a multivariate analysis the independent prognostic value of diagnosis modality (screen-detected vs. non screen-detected).

8. See comments on the same question of reviewer 2.

9. We have argue in the DISCUSSION session the limited contribution of chemotherapy to the "falling mortality rate".

In conclusion we hope that the revised version of our article will be accepted for publication.