Reviewer's report

Title: Prognostic significance of urokinase Plasminogen Activator and Plasminogen Activator Inhibitor-1 mRNA expression in advanced breast cancer

Version: 1 Date: 28 April 2006

Reviewer: Maxime Look

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
As far as I know the term advanced means metastasized or relapsed, the patients included are node-positive. I would suggest not to use the term advanced at all.

There are 95 patients described of whom 87 were actually studied with RT-PCR there is no mention why 8 patients were excluded. Table 1 describes the original 95 patients, for the remainder of the figures and tables we must assume 87 patients were used. The authors should explain which patients are excluded and why and change table 1 and possible the text accordingly.

This investigation is inspired by their results of the microarray experiment on 95 patients but there is no reference how exactly they analyzed this microarray experiment. Furthermore the technique RT-PCR is not compared with ELISAs, while they showed for hormone receptors and ERBB2 and NASBA that this could be done. Some comparison of ELISAs and RT-PCR should be included, especially since the authors state that RT-PCR could be used instead of ELISAs, which indeed would be a contribution. As it is now the paper does not really show anything new.

The authors gave no rationale for their choice of using the first quarter against the three higher quarters of uPA and PAI-1.

The statistics in table 2 could not be all Wilcoxon ranks since some clinicopathological factors have more than 2 categories or the table should be changed to show the categories they used and while they are at it include the number of patients involved. Two digits after the decimal point should be sufficient.

In table 3 they show P-values only. They should show HR and confidence intervals also for non-statistically-significant variables. The confidence intervals which they show are very wide, due to the small number of events. The number of events is not large enough to analyze more than one variable.

The authors should be consistent in their terminology and not use RR but HR only.

In the statistical analysis paragraph they mention parametric tests, though there are no results shown for parametric tests.

The definition of overall survival is not clear in the statistical analysis paragraph, they mean breast cancer related death, but did the authors censor deaths from other causes for patients who did not show a breast cancer relapse. The exact definition of distant metastasis is not given, did they include secondary primary breast cancer tumors. How many patients had a loco-regional relapse only?

If the authors should wish to resubmit they might consider asking for some statistical advice.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

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**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes

**Declaration of competing interests:**
I declare that I have no competing interests