MRI Not Considered

The article does not consider the substantial diagnostic added value of modern methods, such as magnetic resonance mammography (MRM).

The authors don't mention that

- The sensitivity of x-ray mammography is below 50% according to the most recent publications (1)
- X-ray mammography overlooks at least 10 times more cancers than MRM. One should not create the impression that x-ray mammography is the gold standard. Too many patients suffer and die from breast cancer because it is detected too late. The diagnostic added value of a technically and methodologically well conducted MRM is undeniably overwhelming.

MRM is obviously laborious and quite expensive (€420), and it requires a steep learning curve. However, in the hands of experienced experts, it is certainly a very promising modality.

Breast cancer is a life threatening disease, the most common cancer, and up to the 55th year of life the most common cause of death in women. Patients therefore have a right to this information.

The authors report that they were involved in the initial description of magnetic resonance tomography and thus create the impression that they "discovered" the procedure. With all due respect, it should not be forgotten that other studies pre-dating and post-dating theirs have enabled fundamental advances in coil development, investigative techniques, and image interpretation. A greater degree of objectivity and detachment seems advisable.

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In Reply:

The readers' correspondence confirms that early detection of breast cancer by means of imaging is one of the most misunderstood terms. While a mortality reduction due to screening has been proved, women and their doctors are confused and uncertain because of articles discussing methods that have not been sufficiently confirmed or are applied only in high risk or symptomatic settings. Data on women with a normal risk are lacking.

The information considered as lacking by Professor Schild is either not included in the original published article (table 1) or not transferable because of a different patient selection. The fact that he interprets a rate of 10% of DCIS not detected by mammography screening (reference 20) as confirmation of the results of the Bonn study (where it is "50%") is curious. Unfortunately,

essential data on the obvious pre-selection of patients are lacking in the Bonn study. They do not translate to a normal patient cohort.

By contrast to a diagnostic examinations which assess targeted questions, in systematic screening 1000 women have to be investigated to detect 5–7 breast cancers among many benign changes. Mammography screening is successful in this regard, if high quality assurance and specialization are warranted. More than 50 women will, however, have to be recalled; 30 of these 50 examinations are solved by additional imaging. False positive recommendations for biopsy (in benign findings) are avoidable in 5–10/1000 women. Recommendation of 6-month follow-up examinations with ensuing longer term uncertainty affect 10/1000 women at the most.

Schild's arguments with regard to the study reported by Berg et al are wrong. Berg found 4.2/1000 additional cancers in the risk cohort; in the usual screening cohort, <2/1000 additional cancers might be detected by ultrasonography. The wrongly cited 8.5% do NOT concern the detection rate of cancers. (The author apologizes for the typo, which made it read 8.8% instead of 8.5%). They affect all positive findings: 4.2/1000 true positive and 81/1000 false positive additional biopsy recommendations owing to ultrasonography. Mammography plus ultrasonography even resulted in 104 false positive biopsies and a further 108 6-month follow-up examinations per 1000 women (including one malignancy). Worldwide MRI data have similar problems. Are these methods ready to be used in screening?

Professor Kaiser also makes the mistake of not distinguishing between systematic, population based screening and diagnosis. Screening asymptomatic women is not a diagnostic test (WHO definition). Our article is about the use of MRI and ultrasonography in the screening situation. The following statements by Professor Kaiser are incorrect and misleading:

- The cited study by Pisano concerns subgroups outside the typical screening age range (e50–e69). The investigations were conducted without the high and indispensable quality assurance that is required in European screening programs.
- Table 1 includes correct literature citations about the high risk cohort. Otherwise, the numbers given correspond to current scientific knowledge (e56, 1–3). According to this, all expert committees worldwide advise against regular use of MRI except in high risk cohorts or special indications (e67–e70).
- MR mammography without contrast medium is of no value in detecting breast cancer. MRI with contrast medium and dynamic contrast medium MRI were first described by us (e72, 3) and further developed in collaboration with numerous groups held in high esteem. The citations that relate to the actual topics on this article can be found in our study's reference list.

We all want to detect more cancers, but this has to be balanced against the burden of potential side effects placed on the patient. As long as reliable detection and side effects that are acceptable for the many healthy

women are not yet assured for the use of other methods for the screening situation (not for targeted diagnostics), quality assured mammography screening remains the only responsible recommendation. Information about the method's limitations has to be provided simultaneously. Close communication of all doctors within and outside screening has to ensure that symptoms are recognized early and women with symptoms or risk constellations are referred to targeted investigations. Meanwhile co-operations are building up between screening doctors, gynecologists, general practitioners, and breast centers, which allow to use the current imaging options and the possibilities offered by our healthcare system to do battle on behalf of our patients.

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For additional cited literature see references in the original article.

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Conflict of interest statement

The authors of all letters and the reply declare that no conflict of interest exists according to the guidelines of the International Committee of Medical Journal Editors.