Ductal Carcinoma in Situ – Do We Really Need a New Nomenclature?

David L. Wachter^a Matthias W. Beckmann^b Arndt Hartmann^a

^aPathologisches Institut,

^bFrauenklinik, Universitätsklinikum Erlangen, Germany

With great interest we read the letter to the editor by Tavassoli and Sakorafas [1] proposing a new nomenclature for intraductal neoplasias of the breast. The term 'intraepithelial neoplasia' is widely used and accepted in different organs. In the mammary gland it is used as an alternative for lobular neoplasias (LN), e.g. LN 2 instead of classical carcinoma lobulare in situ (CLIS). Tavassoli and Sakorafas argue that it is time to abandon the term ductal carcinoma in situ (DCIS) and introduce ductal intraepithelial neoplasia (DIN) 1a-c, DIN2 and DIN3 instead.

With some of the arguments in the letter, however, we cannot agree. The authors argue that the diagnosis of 'carcinoma' may lead to overtreatment. However, overtreatment of low-grade DCIS should be avoided using standardized therapeutic regimens. Further, they state that patients confronted with the diagnosis of 'carcinoma' could feel anxiety, emotional stress, and depression. This possibility in our opinion would still exist, even if patients are confronted with the diagnosis DIN, because the treating physician still would have the duty to inform the patients about their disease and possible consequences or prognosis. Moreover, the authors criticize that the old system implies a multistep model in breast carcinogenesis. This would also be true for the new proposed system.

Nonetheless we agree that, for the sake of unification and simplification, a new nomenclature for intraductal lesions of the breast would be appropriate. This new nomenclature should have advantages compared to the old accepted and approved concept. It should especially emphasize histomorphology and clinical consequences based on functional aspects. Therefore, we think a five-tiered concept, as proposed (DIN1a-c, DIN2, and DIN3) is too complicated and will confuse both patients and surgical pathologists. In this respect, we do not consider it necessary to divide the DIN1 lesions into 3 different categories.

Atypical ductal hyperplasia (ADH or proposed DIN1b) per definition differs from low-grade DCIS only by size and limited growth

within the lobulus [2]. This discrimination is arbitrary and should not lead to different therapeutical consequences. ADH exhibits the same biology and molecular changes as low-grade DCIS [3] and should therefore be excised with tumor free margins.

Flat epithelial atypia (FEA or proposed DIN1a) is a lesion which is not well understood and the clinical consequences of this diagnosis are not sufficiently studied. Right now, this lesion qualifies as a so-called indicator lesion, as it is associated with invasive breast cancer (ductal and lobular) and DCIS. Therefore, in our opinion evidence is far too limited to justify an inclusion of FEA in the DIN1 category for clinical purposes. If found alone and not associated with DCIS or invasive cancer, it is not necessary to excise it with clean margins. Therefore it should be described separately.

We agree to separate intermediate-grade and high-grade DCIS from low-grade DCIS for prognostic and therapeutic purposes. In our opinion, it would be best to create a two-tiered system for DCIS, dividing the different phenotypes into low- and high-grade lesions. Both low- and high-grade in situ tumors should be excised in sano, while in high-grade lesions an additional sentinel node biopsy should be performed, if the lesion is large [4].

In summary, we generally agree that a new nomenclature for intraepithelial ductal lesions of the breast, according to intraepithelial lobular lesions and intraepithelial lesions in other organ systems, would be preferable. In our opinion much emphasis should be placed on keeping the system simple and clinical consequences in mind. Therefore, we do not consider it necessary to divide DIN 1 into three different subtypes. We think, a three- or, even better, two-tiered system would be sufficient, as used for instance in non-invasive adenomas of the colon or non-invasive papillary carcinomas of the urinary bladder. ADH in our view should be included in low-grade DCIS, FEA should be described separately until better understood, and DCIS should be divided into low- and high-grade disease with different clinical consequences.

References

- 1 Tavassoli F, Sakorafas GH: 'Ductal Carcinoma In Situ of the Breast' – Is It Time to Replace This Term by 'Ductal Intraepithelial Neoplasia of the Breast'? *Onkologie* 2009;32:218.
- 2 Bocker W, Hungermann D, Weigel S, Roterberg K, Decker T: [Atypical ductal hyperplasia and atypical epithelial proliferation of ductal type.] *Pathologie* 2009;30:42–48.
- 3 Simpson PT, Reis-Filho JS, Gale T, Lakhani SR: Molecular evolution of breast cancer. *J Pathol* 2005; 205:248–254.
- 4 van Deurzen CH, Hobbelen MG, van Hillegerberg R, van Diest PJ: Is there an indication for sentinel node biopsy in patients with ductal carcinoma in situ of the breast? A review. *Eur J Cancer* 2007;43:993–1001.