Breast Cancer Research and Treatment (2019) 174:551–552
https://doi.org/10.1007/s10549-018-05093-9

LETTER TO THE EDITOR

Ectopic breast tissue and cancer

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Received: 4 December 2018 / Accepted: 7 December 2018 / Published online: 13 December 2018

Dear Editor,

We have read with great interest the article by Terada and colleagues, which highlighted the importance to distinguish between "primary" occult breast cancer (OBC) in axillary lymph nodes (ALNs) and "metastatic" OBC from micro-primary breast tumor, to evaluate if omission of mastectomy and whole-breast radiation therapy (WBRT) is acceptable in this setting [1]. Moreover, Yang and Lv [2] have agreed with Terada and colleagues about the idea that method to distinguish between hypothetical "primary" OBC in ALNs and "metastatic" OBC from micro-primary breast tumor is a pre-condition for the omission of local treatment for OBC patients, but suggested meticulous bilateral check-up of axilla to exclude nodal metastases of micro-primary breast tumor from accessory breast tissue or ectopic breast tissue (EBT) in axilla (not necessarily in ALNs): in such cases, they stated that omission of mastectomy or WBRT "could be more optimistic" [2].

Embryonic breast develops from the 4th week of pregnancy by a bilateral ectodermal tissue which forms the ventral ideal line, so-called milk line. EBT results from the incomplete involution of this embryological line; commonly, it is localized in the axilla although could develop in all sites along the milk line and is classified into eight clinical classes, according to Kajava [3] (Table 1). EBT represents the most frequent congenital abnormality and includes either supernumerary or aberrant breast; this tissue responds to the hormonal stimulation and could undergo changes during puberty, pregnancy and/or lactation. EBT may be a site in which arise either benign or more rarely malignant breast diseases [3]. In our experience, from January 1995 to December 2014, we have observed 327 (2.7%) patients with EBT out of a total of 12,177 subjects who had a clinical visit for breast lesions [3]. Among these patients, four malignancies were diagnosed, but none had primary breast cancer from EBT in ALNs. However, one of them had an infiltrating ductal triple-negative cancer in the left axilla with lymph node metastases who required chemotherapy followed by radiation therapy: at her last follow-up visit, the patient was still alive and followed by an oncologist for pulmonary and hepatic metastases. On this basis, as Yang and Lv [2], we believe that a meticulous check-up of bilateral axilla in OBC from accessory breast tissue or EBT is necessary and that omission of mastectomy or WBRT "could be more optimistic", but only in selected cases at low risk of disease's diffusion.

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Table 1 Kajava's 1915 classification

Class I	Complete breast with nipple, areola and glandular tissue
Class II	Nipple and glandular tissue, without areola
Class III	Areola and glandular tissue, without nipple
Class IV	Glandular tissue only
Class V	Nipple and areola, without glandular tissue (*pseudomamma*)
Class VI	Nipple only (*polythelia*)
Class VII	Areola only (*polythelia areolaris*)

Funding No funding has been received.

Compliance with ethical standards

Conflict of interest All authors declare that they have no conflict of interest.

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

Informed consent Informed consent was obtained from all individual participants included in the study.

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