



Occult breast cancer: the uncommon presentation of a common disease

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Cancer of unknown primary site (CUP) is defined as the presence of secondary lesions in the absence of any detectable primary tumor at the time of presentation. The CUP syndrome represents a rare condition with varying biologic behaviors and generally poor prognosis (1,2). However, substantial improvements have been made in treating some subgroups. One such subset consists of patients with occult breast cancer (OBC). OBC manifests as metastasis in the axillary lymph nodes without any evident primary breast lesion or distant disease on clinical and radiological examination. Such patients account for 0.3–1.0% of all breast cancer patients and are potentially curable when managed according to standard guidelines (3–6). Nevertheless, clinical-pathological features, treatment approaches and outcomes of OBC are still controversial, due to the extreme rarity of this disorder and the impossibility to carry on large population studies.

Ge and colleagues recently published an interesting population-based study utilizing the data of the Surveillance, Epidemiology, and End Results (SEER) dataset, with the aims of describing the clinical-pathological characteristics, treatment and survival outcomes of OBC (7). The SEER Program collects cancer incidence data from US population-based cancer registries and provides publicly available information on cancer statistics. Nowadays, SEER covers approximately 34.6% of the US population and provides data on patient demographics, primary tumor site, tumor morphology, stage at diagnosis, type of treatment, and outcomes (8). The wide and detailed systematic data collection

of cancer registries represents a unique and fundamental opportunity to obtain and analyze data on low incidence tumors, such as OBC. On this basis, in their analyses, the authors were able to compare the features and outcomes of 479 OBC to 115,739 non-OBC patients, to our knowledge the largest study population described up to now. Compared with non-OBC, OBC showed older age, more advanced stage, higher proportion of negative hormone receptor expression, higher proportion of HER2-positive status, greater likelihood of having ≥ 10 positive LNs, and lower likelihood of surgical treatment. Interestingly, OBC patients demonstrated a significant survival advantage over non-OBC patients and OBC patients undergoing axillary lymph-node dissection exhibited outcomes similar to those of the breast-conserving surgery group and the mastectomy group,

The work of Ge and colleagues is indeed a valuable contribution to better describe the features of this uncommon disorder, still several questions remains open. In particular, records of systemic therapies are not reported by SEER as well as the patterns of relapse. Moreover, HER2 status was available only after 2010 and the type of axillary lymph-node surgery performed was not specified, therefore, surrogate data were used to categorize the surgical approach. In addition, the immunohistochemical profile of each OBC was evaluated on the axillary lymph-nodes, which are not the primary sites of tumor and thus could present a different biologic profile as shown in previous research (9–11). Finally, this retrospective study enrolled patients diagnosed between 2004 and 2014, when the MRI

examination was already available. However, the authors do not specify if all the OBC patients performed the breast MRI, in order to decrease the risk of misdiagnosis (12,13).

To conclude, as for the other rare conditions, future research should be directed in collecting and evaluating a larger cohort of patients with the aim to better understand the biological pathways and the clinical behavior of this uncommon type of breast cancer, in order to improve the clinical management strategies and outcomes.

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Footnote

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