



CONTINUING EDUCATION PROGRAM: FOCUS...

Diagnostic strategy for the assessment of axillary lymph node status in breast cancer



F. Maxwell^a, C. de Margerie Mellon^a, M. Bricout^a,
E. Cauderlier^a, M. Chapelier^a, M. Albiter^a,
P. Bourrier^a, M. Espié^b, E. de Kerviler^a,
C. de Bazelaire^{a,*}

^a Service de radiologie, hôpital Saint-Louis, 1, avenue Claude-Vellefaux, 75475 Paris cedex 10, France

^b Centre des maladies du sein, hôpital Saint-Louis, 1, avenue Claude-Vellefaux, 75475 Paris cedex 10, France

KEYWORDS

Breast cancer;
Axillary
lymphadenopathy;
Staging;
Ultrasound;
MRI

Abstract The nodal status in breast cancer is a major prognostic factor in terms of survival. It also plays a role in the therapeutic decision-making process. Therefore, the evaluation of lymph node involvement in breast cancer is imperative in establishing a personalized treatment scheme. The sentinel lymph node procedure has proved successful for small breast tumors (T1–T2), limiting axillary lymphadenectomy and its side effects without changing overall survival. Even so, a substantial number of women must undergo axillary lymphadenectomy during a second surgery when the analysis of the sentinel node discloses major nodal involvement. Imaging can improve patient selection, especially those who appear eligible for immediate axillary lymphadenectomy. Ultrasound is able to depict morphological abnormalities in the lymph nodes such as cortical thickening, peripheral vascularization, hilar infiltration and loss of the kidney-shaped appearance of a normal node. When ultrasound is negative, the risk of massive nodal involvement is limited, thus allowing the oncologist to take an approach with the sentinel lymph node procedure. Magnetic resonance imaging (MRI) can also be useful in detecting pathological lymph nodes, particularly with diffusion-weighted MRI sequence.

© 2015 Éditions françaises de radiologie. Published by Elsevier Masson SAS. All rights reserved.

* Corresponding author.

E-mail address: cedric.de-bazelaire@sls.aphp.fr (C. de Bazelaire).

Lymph node status reflects the interaction between, the aggressiveness of the tumor that tends to grow and metastasize and, on the other hand, the host's resistance in its effort to contain the cancer. Lymph node involvement is the main prognostic factor – independently of other factors such as size – for predicting overall survival and progression-free survival. At 5 years, for all types of cancer, survival rates are greater than 82% for patients with negative nodes. This decreases to 73% when 1–3 lymph nodes are affected, 46% if 4–12 nodes are concerned and drops to 28% if more than 13 lymph nodes are invaded [1].

Nodal status also influences the therapeutic indications. Neoadjuvant chemotherapy is indicated in the event of type N2 axillary invasion, for example (Tables 1 and 2). The absence of clinical nodal involvement allows to consider opting for the sentinel lymph node procedure and thereby avoiding unnecessary surgical dissection. Tumor involvement of an axillary node is an indication for adjuvant chemotherapy and supraclavicular radiation therapy.

Table 2 TNM classification: clinical and radiological criteria.

Stade	Berg's level	Stade
N1	I and II ipsilateral LOOSE	II
N2	I and II ipsilateral FIXED	IIIA
	Isolated internal mammary chain	
N3	III ipsilateral	IIIC
	Associated internal mammary I or II	
	Supraclavicular	

Axillary lymphadenectomy is the most reliable technique for assessing nodal involvement. However, it is limited by side effects following removal, such as lymphedema (2–18%), pain (16–56%), limitation of shoulder movement (4–45%) and weakness of the arm (19–35%). Axillary lymph node dissection appears to be less effective for women with

Table 1 TNM Classification: pathological criteria.

Regional lymph nodes pN

Nx

The involvement of regional lymph nodes cannot be assessed (e.g. previously removed surgically or not available for histological analysis because of the lack of relevant specimen)

N0

Absence of histological regional lymph node involvement and no additional examination for isolated tumor cells

N0 (i) absence of histological regional nodal involvement, negative immunohistochemistry study (IHC)

N0 (i +): absence of histological regional nodal involvement, positive IHC, with cell clusters < 0.2 mm (considered without lymph node metastasis)

N0 (mol–): absence of histological regional nodal involvement, negative molecular biology [reverse transcriptase polymerase chain reaction (RT-PCR)]

N0 (mol+): absence of histological regional nodal involvement, positive molecular biology (RT-PCR)

N1mi

Micrometastases > 0.2 mm and ≤ 2 mm

N1

Involvement of 1 to 3 axillary lymph nodes and/or nodal invasion of the internal thoracic chain detected on the sentinel node without clinical signs

N1a: involvement of 1 to 3 axillary lymph nodes

N1b: involvement of the lymph nodes of the internal thoracic chain found on sentinel node without clinical signs

N1c: involvement of 1 to 3 axillary lymph nodes and invasion of the lymph nodes of the internal thoracic chain found on sentinel node without clinical signs (+ pN1a pN1b)

N2

Invasion of 4 to 9 axillary lymph nodes or invasion of suspect ipsilateral internal thoracic nodes, in the absence of axillary lymph node involvement

N2a: involvement from 4 to 9 axillary lymph nodes with at least one cell cluster > 2 mm

N2b: involvement of the suspect ipsilateral internal mammary nodes, in the absence of axillary lymph node involvement

N3

Involvement of at least 10 axillary lymph nodes or invasion of subclavicular lymph nodes (level III) or invasion of the suspect ipsilateral internal thoracic nodes with axillary lymph node involvement or invasion of more than 3 axillary lymph nodes and invasion of internal thoracic chain nodes detected on the sentinel node without clinical sign or invasion of the ipsilateral supraclavicular nodes

N3a: involvement of at least 10 axillary lymph nodes (with at least one cell cluster > 2 mm) or invasion of subclavicular lymph nodes

N3b: involvement of ipsilateral internal mammary suspected nodes with invasion of the axillary nodes or invasion of more than 3 axillary lymph nodes and invasion of the internal mammary chain nodes detected with the sentinel node without clinical signs

N3c: involvement of the ipsilateral supraclavicular nodes

Download English Version:

<https://daneshyari.com/en/article/2736800>

Download Persian Version:

<https://daneshyari.com/article/2736800>

[Daneshyari.com](https://daneshyari.com)