HAUTE AUTORITÉ DE SANTÉ

DIAGNOSIS
New medicinal product
July 2017

BRIEF SUMMARY OF THE TRANSPARENCY COMMITTEE OPINION

ESTROTEP (^{18}F-fluoroestradiol), radiopharmaceutical for diagnostic use

Insufficient clinical benefit in the absence of any role in the diagnostic strategy for oestrogen-receptor positive metastatic breast cancer

Main points

- ESTROTEP is a radiopharmaceutical with marketing authorisation for positron emission tomography (PET) imaging for characterisation of metastatic lesions, known or suspected, as expressing oestrogen receptors in adult breast cancer, initially expressing the oestrogen receptor.
- Given the lack of demonstrative data, especially in situations of difficult disease staging, the role of ESTROTEP in the diagnostic strategy has not been able to be defined in hormone-dependent metastatic breast cancer expressing oestrogen receptors.

Therapeutic strategy

- The therapeutic strategy for metastatic breast cancer essentially depends on the histological characteristics of the tumour, prior treatments received and their tolerance, the site of the metastases, the time until relapse and predictive factors for treatment response (expression of hormonal receptors, especially oestrogen, and/or HER2 receptors).
- Evaluation of the expression of oestrogen receptors is carried out by anatomical pathology testing after biopsy of the primary tumour and a secondary lesion for tumours at the metastatic stage. It allows the response to hormone therapy to be predicted, but must be re-evaluated in case of recurrence or progression of the tumour to a metastatic stage because of its possible evolution over time and its heterogeneity between the primary tumour and the metastases in 15 to 30% of cases.
- **Role of the medicinal product in the therapeutic strategy**

To the extent that:
- fluoroestradiol (^{18}F) PET imaging makes it possible to characterise only the expression of oestrogen receptors (OR) but not that of progesterone receptors, HER2 or other biomarkers, unlike anatomical pathology testing after lesion biopsy,
- the demonstrative data available are insufficient, especially in situations of difficult disease staging (early metastases under hormone therapy, difficult to access for biopsy, etc.),

the role of PET imaging after administration of ESTROTEP in the diagnostic strategy for metastatic breast cancer initially expressing the oestrogen receptor cannot be defined.

Clinical data

- The evaluation of fluoroestradiol (^{18}F) PET in the characterisation of secondary lesions to an OR+ breast cancer is primarily based on literature data and one phase II study. These efficacy data suggest a sensitivity of about 84%, 95% CI = [73; 91] and a specificity of about 98%, 95% CI = [90; 100] in the detection of OR+ lesions as well as a negative predictive value of about 73%, 95% CI = [58; 89] and a positive predictive value of about 52%, 95% CI = [34; 69] in the prediction of the response to hormone therapy.
- However, these results must be interpreted with caution given the methodology of the studies (old or unpublished studies, performed on limited numbers) and biases related to the effectiveness of the hormone therapy and mechanisms of hormone resistance.
- The available data do not reveal any safety signals.

- Overall the available data come from studies with a low level of evidence and do not allow solid conclusions to be drawn as to a possible diagnostic benefit of fluoroestradiol (^{18}F) PET compared with immunohistochemistry of lesions after biopsy.
- Moreover, the potential impact of fluoroestradiol (^{18}F) PET on mortality, morbidity, quality of life or the organisation of the healthcare system has not been demonstrated.

Special prescribing conditions

- Medicinal product reserved for hospital use.
- Radiopharmaceutical product that must be used by qualified professionals.

Benefit of the medicinal product

- The actual clinical benefit* of ESTROTEP is insufficient in its indication to justify reimbursement by National Health Insurance.
- Does not recommend inclusion on the list of reimbursable products for hospital use.

HAS
HAUTE AUTORITÉ DE SANTÉ
This document was created on the basis of the Transparency Committee Opinion of 05 July 2017 (CT-15641) and is available at **www.has-sante.fr**

* The actual clinical benefit (ACB) of a medicinal product describes its benefit primarily in terms of its clinical efficacy and the seriousness of the condition being treated. The HAS Transparency Committee assesses the ACB, which can be substantial, moderate, low or insufficient for reimbursement of the medicinal product for hospital use.