

# **Evaluating the economic impact of omitting completion axillary lymph node dissection in patients with T1/2N0M0 breast cancer and tumor-involved sentinel lymph node in Germany**

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## **Project duration:**

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## **Background:**

In the management of breast cancer, completion axillary lymph node dissection (cALND) was previously recommended for patients with at least one tumour-affected sentinel lymph node (SLN). Several prospective trials predominantly in T1/2N0M0 breast cancer patients undergoing breast-conserving surgery and a few studies in those patients undergoing mastectomy showed no benefit and increased arm morbidity with this procedure.

## **Study Objective:**

This study aims to examine the overall economic impact of evidence from these trials into the routine clinical management on patients with T1/2N0M0 breast cancer and tumor-involved sentinel lymph nodes in Germany. Specifically, this study seeks to determine (i) What are the cost implications of omitting cALND resulted from the current change in practice due to the available evidence on the axillary surgical management; (ii) What are the corresponding health implications of omitting cALND; and (iii) what are the overall economic impact on both cost and health of omitting cALND among the above specified breast cancer patient group in Germany.

## **Study Design:**

This study adopts the health system perspective and uses the prospectively collected data from patients diagnosed with primary breast cancer in German breast cancer units between 2008 and 2015. Cost analysis follows three steps: identification, measurement and valuation of all resources consumed in both in-patient and out-patient settings. The combination of clinical pathways, data on actual resource consumption and official data sources on unit cost are employed in relevant costing steps. The estimation of health implication and the overall economic impacts are based on decision modelling. The model estimates on the health consequences associated with the axillary surgical management are derived from the published literature.

## Publications:

No publication related to the economic component of this study. There are one publication and one manuscript produced from the other study component which are not mentioned in this project description.

One publication

Hennigs, A., Köpke, M., Feißt, M., Riedel, F., Rezai, M., Nitz, U., Moderow, M., Golatta, M., Sohn, C., Schneeweiss, A. and Heil, J. (2019). **Which patients with sentinel node-positive breast cancer after breast conservation still receive completion axillary lymph node dissection in routine clinical practice?** Breast Cancer Research and Treatment 173, 429-438, doi: 10.1007/s10549-018-5009-2.

One manuscript in December 2018

Hennigs, A., Riedel, F., Feißt, M., Köpke, M., Rezai, M., Nitz, U., Moderow, M., Golatta, M., Sohn, C., Heil, J. **Evolution of the use of completion axillary lymph node dissection in patients with T1/2N0M0 breast cancer and tumour-involved sentinel lymph nodes undergoing mastectomy: a cohort study**