

Technical aspects, implications, and innovations of the sentinel lymph node biopsy in breast cancer

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Technische aspecten, toepassingen en innovaties van de schildwachtklierprocedure in borstkanker

In dit proefschrift worden de technische verbeteringen van de schildwachtklierprocedure bij borstkanker. Een schildwachtklierprocedure wijst uit of de kanker zich naar de lymfeklieren heeft verspreid. Deze informatie is belangrijk, omdat de uitkomst helpt beslissen of verdere nabehandelingen nodig zijn.

Een vereenvoudigd protocol met minder lymfescans is betrouwbaar in het vinden van de schildwachtklier.

De one-step-nucleic acid amplification - OSNA-techniek, die de aanwezigheid van lymfklieruitzaaiingen vaststelt is preciezer dan de traditionele methode en leidt niet tot meer nabehandelingen. Deze techniek is ook nuttig voor het inschatten van risico op bestraling na borstverwijdering en reconstructie.

Een nieuwe techniek met de magnetische tracer om de schildwachtklier op te sporen wordt beschreven. Door de radioactieve tracer te vervangen door de magnetische tracer, wordt de procedure eenvoudiger en veiliger. En de resultaten blijken hetzelfde.

De magnetische tracer kan afbeeldingen van de MRI-van de borst verstoren. Maar een contrast-mammografie is een goed alternatief voor de MRI.

Technical aspects, implications, and innovations of the sentinel lymph node biopsy in breast cancer

In this thesis the technical improvements of the sentinel lymph node biopsy in breast cancer are described. The sentinel lymph node biopsy shows whether cancer has spread to the lymph nodes. This information is meaningful, as the outcome aids the decision on further treatments strategies.

A simplified protocol with fewer lymphoscintigraphies has proven to be reliable. The new one-step-nucleic acid amplification, the OSNA-technique, detecting lymph node metastases, is more accurate than the traditional method but does not lead to overtreatment. This technique is also useful assessing the risk on radiation therapy after removal of the breast and reconstruction.

A new magnetic technique to locate the sentinel lymph node is described. The radioactive tracer is replaced by a magnetic tracer

making the procedure safer and simpler. The results with this new procedure are equivalent.

The magnetic tracer interferes with images of the MRI of the breast. A contrast-enhanced mammography has proven to be a reliable alternative to MRI.