

PREOPERATIVE BREAST MRI- EXAMINATION FOR EVERYONE? A PROSPECTIVE MULTICENTER STUDY

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Background

Published retrospective data of our study group demonstrated, premenopausal women, patients with lobular invasive breast cancer or patients with high breast density (ACR3+4) significantly benefit from MRI leading to additional detection of malignant foci of 20.2% in the index and 2.5% in the contralateral breast, otherwise not detected by routine imaging. Critics of preoperative MRI focus on higher false-positive rates leading to unnecessary surgical procedures and mastectomies. Therefore, MRI in preoperative imaging remains controversial.

Methods

To validate our prospective data we initiate a prospective one-armed multicenter trial for patients with histologically confirmed breast cancer performing routine imaging by ultrasound and mammography followed by MRI imaging based on menopause status, histologic subtype, ACR and BIRADS-classification. Primary endpoint is the rate of additional findings and change of treatment strategy, secondary endpoints are local recurrence-free, distant recurrence-free and overall survival. Additional MRI findings are calculated to be above 10% with a number of 100 patients recruited and a power of 80%.

Conclusion

MRI is detecting more tumor foci than conventional imaging but remains controversial in primary breast cancer for preoperative imaging because of fear of over-diagnosis and the increased morbidity of additional potentially unnecessary surgical procedures. This planned one-armed prospective multicenter trial is designed to confirm our retrospectively revealed data defining subgroups with significant benefit of preoperative MRI to come to a consensus avoiding over-diagnosis and false-positive results leading to clinically beneficial and cost-effective use of preoperative MRI.

Keywords

breast cancer; MRI; preoperative management; prospective trial, premenopausal, breast Imaging

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