	All 57 (100)	Biologic Subtype N (%)			P Value
		ER+/H2-17 (30)	H2+25 (44)	ER-/H2-15 (26)	
Age, median (IQR), years	55 (49–61)	55 (50–60)	53 (38–59)	60 (50–67)	0.11
Presentation					0.36
Mass	15 (26)	3 (18)	6 (24)	9 (60)	
Skin Abnormality	41 (72)	13 (76)	19 (76)	6 (40)	
Histology					0.18
Ductal	49 (86)	14 (82)	24 (96)	11 (73)	
Lobular	4 (7)	2 (12)	0	2 (13)	
Mixed Mammary	4 (7)	1 (6)	1 (4)	2 (13)	
cN+	52 (91)	16 (94)	23 (92)	13 (87)	0.76
pCR Breast	22 (39)	1 (6)	15 (60)	6 (40)	<0.001
pCR LN (of 52 cN+)	21 (40)	1 (6)	15 (65)	5 (38)	<0.001
LN+, median, IQR	8 (4–11)	8 (3–14)	0 (0–3)	5 (0–9)	0.004
Total pCR (ypT0/is,ypN0)	20 (35)	0	14 (56)	6 (40)	<0.001

Conflict of interest: No conflict of interest.

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39. Magnetic marker localization for non-palpable breast cancer: Initial experience

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Introduction: Magnetic Marker Localization (MaMaLoc) was developed as a novel intra-operative localization technology for non-palpable breast cancer. It aims to replace other localization technologies. The MaMaLoc technology consists of a newly developed magnetic localization marker and a magnetic detector. We present the ex vivo and first in vivo experience with the technology.

Material and methods: The magnetic marker was first implanted into a chicken breast. Imaging was obtained to assess the visibility of the marker on ultrasound (US), mammography, computed tomography (CT) and magnetic resonance imaging (MRI), which is essential for the intended image-guided placement of the marker. Next, the marker was implanted into two breast amputation specimens. Two surgeons were then tasked to perform breast conserving surgery (BCS) on a simulated lesion in the breast specimen using a magnetic detector. They scored the performance of the magnetic technology based upon their experience with other localization technologies.

Next, an in vivo safety and feasibility study was designed. Fifteen patients with a unifocal lesion that were scheduled for primary BCS using a single iodine seed (Radioactive Seed Localisation, RSL) were included. Subjects received both the standard of care (RSL) and the experimental magnetic technology (MaMaLoc). Both iodine seed and magnetic marker were placed in a single session using US guidance. Up to 30 days after placement, BCS was performed.

During surgery, the ability to transcutaneously detect the magnetic marker using the magnetic detector was recorded. Semi-objective data regarding the technology were obtained from radiologists and surgeons, utilizing a 5-points Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree' and a set of statements regarding convenience, logistics, clinical applicability etcetera and tailored to specific radiology- or surgery-specific characteristics.

Results: Ex vivo data showed excellent visibility on US and mammography, by far the two most used imaging technologies for guided marker placement. On CT, visibility was slightly impaired due to a small artefact. On MRI, a susceptibility artefact obscured a large area of 7 cm diameter.

Surgeons scored the technology better than wire-guided localization (WGL) and radioguided occult lesion localisation (ROLL), and at least comparable to RSL. The technology was therefore considered feasible.

At the date of abstract submission, the in vivo study was still ongoing and results will be presented at the ESSO 2016 congress.

Conclusions: Magnetic marker localization is a promising new technology to improve breast conserving surgery. It combines the benefits of RSL (planning flexibility, continuous re-assessment of surgical approach, accuracy, patient comfort) and of WGL: simplicity.

Conflict of interest: No conflict of interest.

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40. Surgical margin status after breast conserving surgery and presence of residual disease

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Background: The Dutch breast cancer guideline advises to accept focally positive margin after breast conserving surgery (BCS) for invasive breast cancer and not to perform re-excision which, in clinical practice, is the case in half of those patients. To shed a light on the safety of this advice we studied which clinicopathological characteristics are associated with a close, focally positive, and extensively positive margin and the presence and predictors of residual disease and local recurrence.

Material and methods: All consecutively females undergoing BCS for primary DCIS or invasive (T1–T3) breast cancer between Jan 2005 and April 2014 at the Erasmus MC Cancer Institute were included. Definition of negative margin was tumor ≥ 2 mm width from inked margin, close was tumor < 2 mm, focally positive was tumor reaching the inked margin over a length of ≤ 4 mm, and extensively positive was > 4 mm. A subcohort was selected of all patients with re-excision except for those with a negative margin. Their excision specimens were revised by the pathologist. Follow-up information was collected until 1st July 2014.

Results: In total, 499 patients were included and 178 (35.6%) had re-excision including 132 (74.2%) by mastectomy. From those 499 patients, 213 (42.7%) had negative margin of which 15.0% a re-excision, 161 (32.3%) had close margin of which 33.8% a re-excision, 59 (11.8%) had focally positive margin of which 66.2% a re-excision, and 67 (13.4%) had extensively positive margin of which 83.9% a re-excision. Higher differentiation grade, larger tumors, lobular type and tumor positive axillary lymph nodes were significantly associated with more involved tumor margins. Residual disease was present in 79 (54.1%) patients with re-excision and in 21 (34.5%) after close margin, 19 (48.7%) after focally positive margin, and in 38 (78.3%) after extensively positive margin. The presence of residual disease was statistically significantly associated with the length