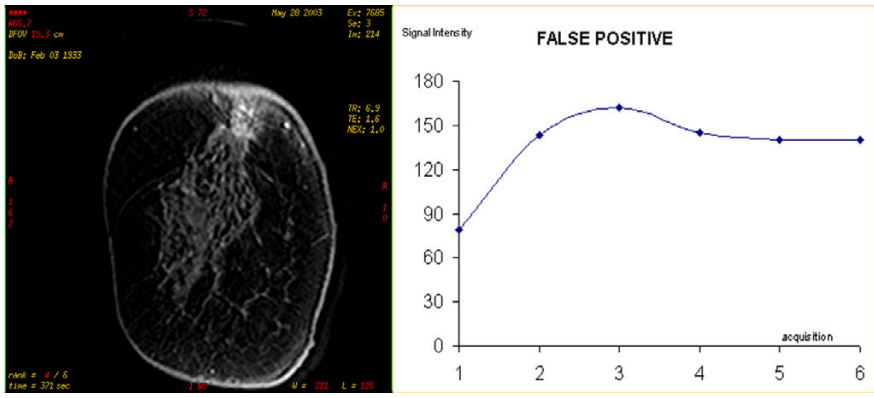
Figure 2



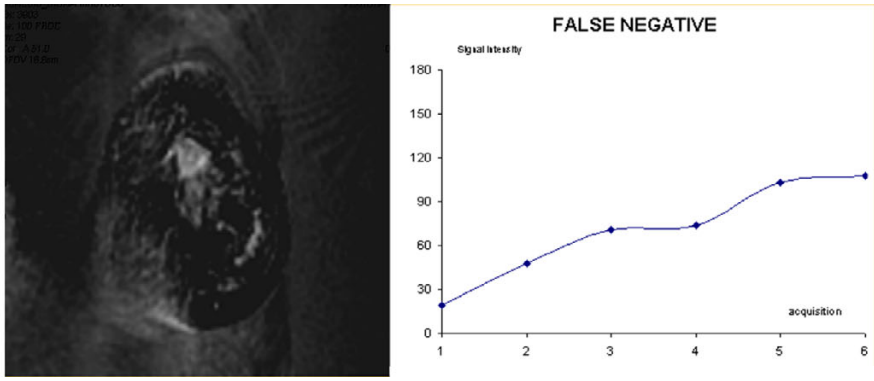
Magnetic resonance mammography 15 months after surgery. The postcontrast image (left image) and the signal–intensity curve (right image) show a 2 cm lesion with inhomogeneous enhancement. (Breast Imaging Reporting and Data System IV). Histology and follow-up reported no malignancy.

Seven false-positive cases were detected on the surgical scar based on histological findings. Malignancy was suspected by ultrasound alone in five cases (two cases graded as ultrasound BI-RADS III, three cases graded as ultrasound BI-RADS IV), by mammography alone in one case (graded as BI-RADS IV), and by both examinations in one case (graded as mammographic BI-RADS III and ultrasound BI-RADS IV). Six of these false-positive cases were graded at MRM as Fischer 4 (Figure 2) and one case was graded as Fischer 6. The mean time between primary treatment (surgery and radiotherapy) and MRM was 13 months (range, 6–24 months). Two out of seven patients underwent the MRM less than 12 months after treatment (6 months and 8 months, respectively).

We found only one false-negative case at MRM. The ultrasonographic detection of a hypoechoic inhomogeneous lesion of 2 cm in correspondence with the surgical scar (ultrasound BI-RADS IV) gave indication to perform MRM. The subsequent MRM scan depicted the lesion as rounded, with regular shape and homogeneous contrast enhancement. The time–intensity curve showed a moderate initial increase and a steady increase in later sequences (Figure 3). The lesion was therefore graded as a Fischer 2 (BI-RADS II) lesion. Despite the negative result of the MRM, the patient underwent surgery after 2 months because of the ultrasonographic suspicion, and a 2 cm mucinous cancer was demonstrated on the surgical scar. The primary malignancy in this patient was again a mucinous type cancer.

Thirteen lesions remote from the surgical scar of prior lumpectomy were detected in seven patients. These lesions were classified as: one Fischer 2, four Fischer 3, three Fischer 4, two Fischer 5, two Fischer 6, and one Fischer 8. The same lesions according to the BI-RADS classes were: 0 cases graded as BI-RADS I, one case graded as BI-RADS II, four cases graded as BI-RADS III, five cases graded as BI-RADS IV, and three cases graded as BI-RADS V.

Figure 3



Magnetic resonance mammography of 52-year-old patient who underwent quadrantectomy, adenectomy and radiotherapy for mucinous cancer. This shows a 3 cm rounded lesion with homogeneous contrast enhancement (left image), with the signal–intensity curve showing moderate initial increase and late steady increase (right image). The lesion (Breast Imaging Reporting and Data System II) was mucinous cancer.