

The Interest of the College Replay Systematic Assessments of Preoperative Imaging

Anne-Sophie BATS^{1,3}, Foucauld CHAMMING'S², Laetitia CAMPIN¹
Chérazade BENSALD¹, Kim DANG-TRAN^{2,3}, Aziz ACHOURI,^{1,3}
Laure FOURNIER^{2,3}, Claude NOS¹, Fabrice LECURU^{1,3}

1 Gynaecological Oncological Surgery, European Georges-Pompidou
Teaching Hospital, Paris

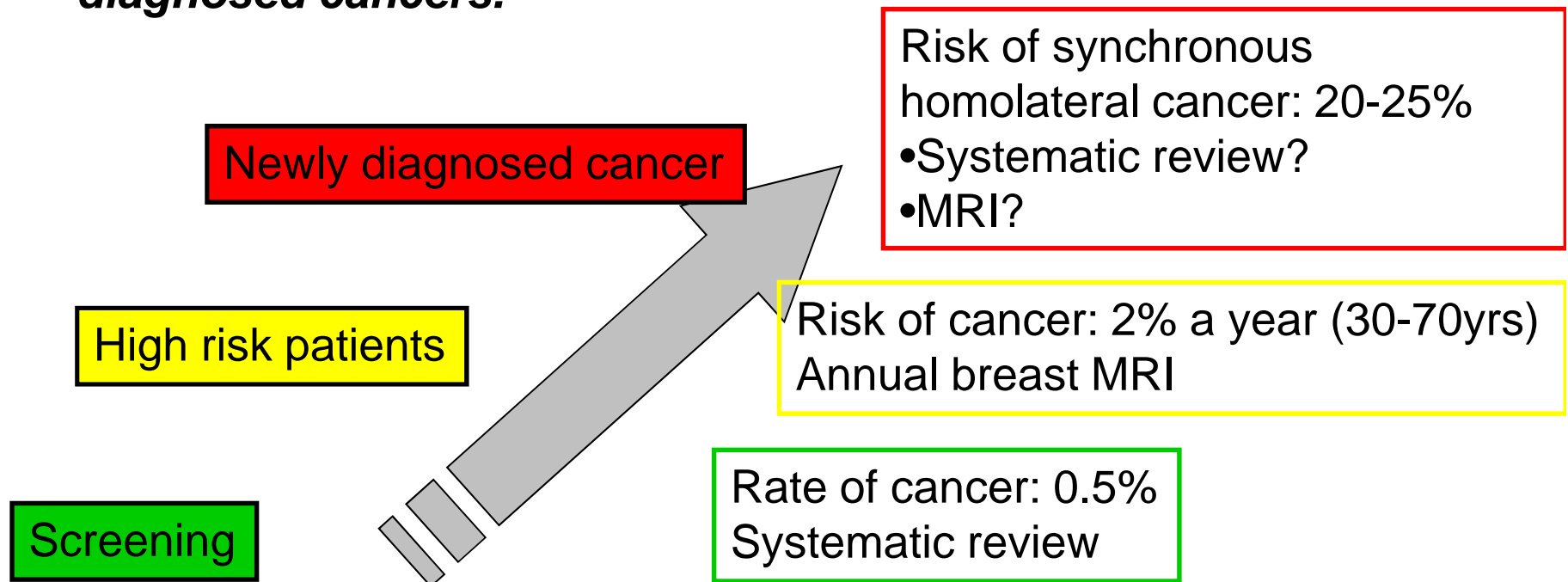
2 Radiology, European Georges-Pompidou Teaching Hospital, Paris

3 Université Paris Descartes, Sorbonne Paris Cité, Paris

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Introduction

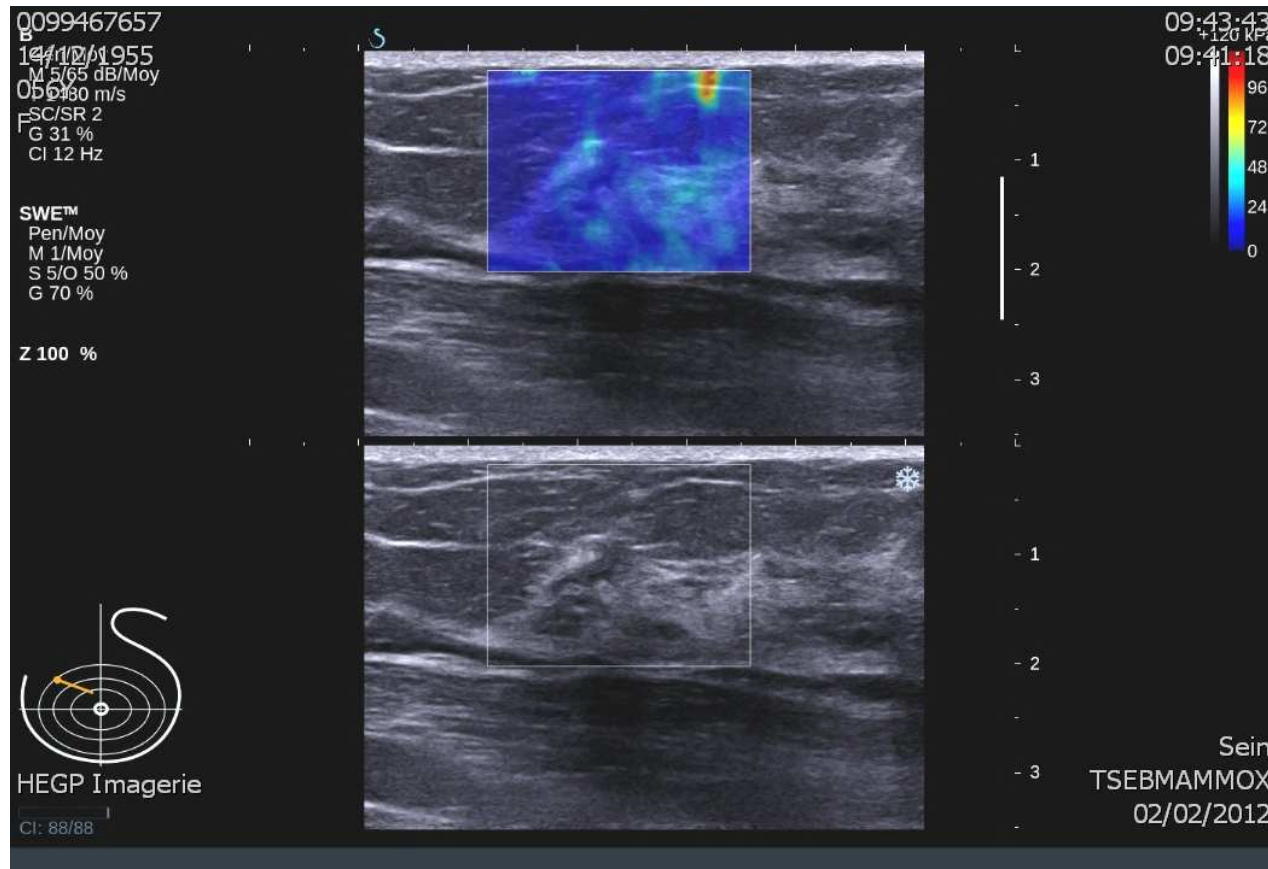
- **Therapeutic strategy** in breast cancer is directly related to the extent of the disease.
- **Preoperative assessment** is of utmost importance.
- ***The double review has been assessed and proposed in systematic screening BUT has never been assessed in newly diagnosed cancers.***



**Development of a strong collaboration
surgeons/radiologists**

*→ Systematic imaging review may contribute to
improve the management of breast cancer.*

Focal asymmetry (BI-RADS 4) in the left upper inner quadrant - Cytology: radial scar
→ ultrasound + biopsy



Left breast

US + elastography
not suspicious

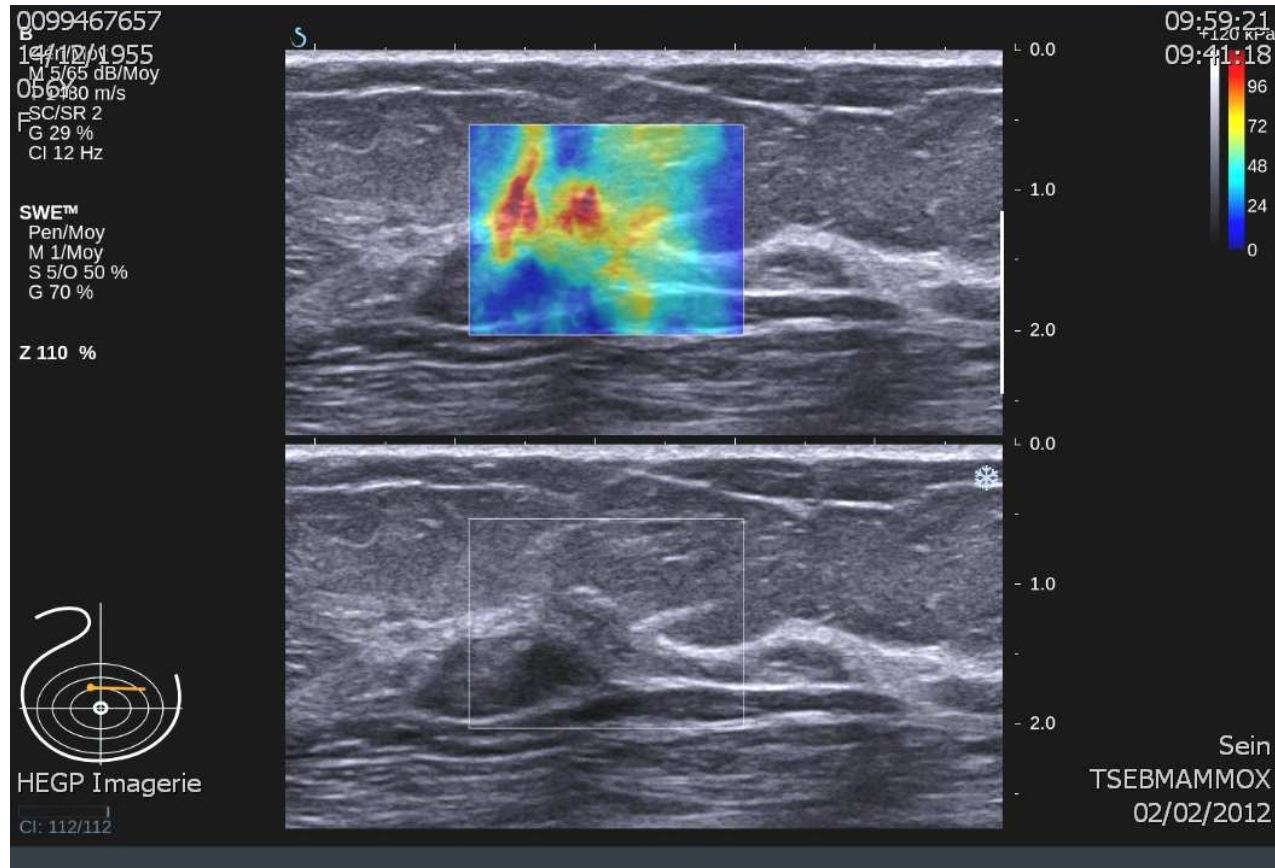
Biopsy:
adenofibroma

Right breast

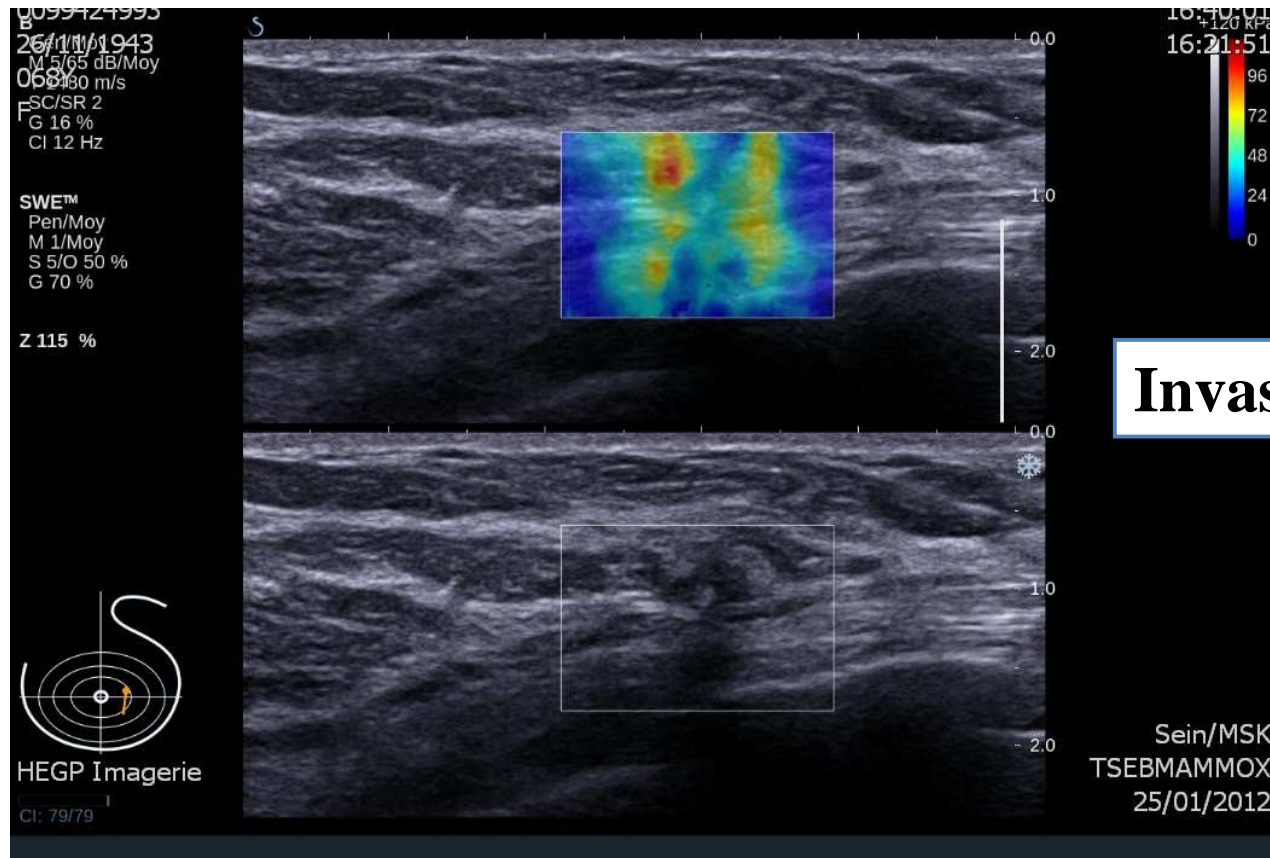
US : distorsion in the upper outer quadrant

Elastography: hard

Biopsy: radial scar + atypical hyperplasia



BI-RADS 5 lesion in the left breast
→ US + preoperative biopsy



Invasive ductal carcinoma

Hypoechoic area
Biopsy → Invasive lobular carcinoma



Objective of the study

To assess the **contribution of systematic preoperative radiological review** in preoperative, surgical and therapeutic strategy of *newly diagnosed breast cancer*.

Material and methods

- **Prospective** study from 05/2011 to 10/2011
- Breast Unit (Gynaecological Oncological Surgery and Radiology), European Georges-Pompidou Teaching Hospital
- Patients with ***breast cancer and surgical indication***
- Preoperative imaging (mammography, breast ultrasound and MRI) was systematically reviewed by the Radiology Team before surgery.

Material and methods

- **Assessment of**
 - **Discordance** between initial conclusions and the reviewed conclusions (BI-RADS, supplementary lesions, contralateral abnormality),
 - **Indication for additional views, breast ultrasound or MR and biopsy**
 - **Modification of therapeutic strategy**

Characteristics of patients

- **Out 64 patients** with breast lesion and radiological review, **33 patients** had breast cancer with surgical indication and ***were included in the study.***
- 34 breast tumours (1 patient with bilateral cancer)
- Median age = 61 yrs (50-73)
- Personal past history of breast cancer: 3 patients (9%)
- Familial past history:
 - Breast cancer: 6 patients (18.2%)
 - Ovarian cancer: 2 patients (6%)

Characteristics of tumours

Median tumour size	17.5 mm (12-22)
Histological type: –Invasive ductal carcinoma –Invasive lobular carcinoma –DCIS	25 (73.5%) 6 (17.6%) 3 (8.8%)
Tumour grade: –Grade 1 –Grade 2 –Grade 3	9 (29%) 16 (51.6%) 6 (19.3%)
ER/PR	28 (82.3%)
HER2	1 (2.9%)
LVSI	8 (23.5%)

20 preoperative samplings (3 cytologies + 17 biopsies)

Review of 33 mammograms +/- ultrasound and 5 MRI

- Mammograms: *different conclusion in 13 cases (33.3%) and identification of 3 supplementary lesions (9%).*
- MRI review : no supplementary lesion
- **17 patients with indication of additional exams :**

Ultrasound	12
Biopsy	11
MRI	5
Magnification	2

6 new supplementary lesions on review and additional imaging

- Identified by
 - Mammogramms in 2 cases (33%)
 - MRI in 3 cases (50%)
 - Ultrasound in 2 cases (33%)

6 new supplementary lesions on review and additional imaging in 6 patients (18.2%)

- 2 visible masses on mammograms in 2 patients with no sonographic traduction → no biopsy
- **Satellites foci of a lobular carcinoma on MRI in 1 patient → biopsy = Lobular carcinoma**
- **Multicentric lesions of ductal carcinoma associated with high grade DCIS visible on ultrasound and MRI → biopsy = Ductal carcinoma**
- 1 benign lump visible by scan → no sampling
- 1 MRI hypersignal without correlation on ultrasound → no sampling

New supplementary malignant tumours

- 2 malignant tumours (33% of supplementary lesions and 6% of review and additional views)
 - **1 case with multicentric tumour and change of therapeutic management (mastectomy instead of neoadjuvant chemotherapy)**
- These 2 cases was diagnosed by MRI (2 cases) and ultrasound (1 case)
- No contralateral cancer

Limits of the study

- **Preliminary study**
- **Small cohort**
- **Methodology: no systematic new ultrasound**

Relecture de mammographie en cas de cancer nouvellement diagnostiqué : quel impact thérapeutique ?

R KHAYAT, C HAGAY, B BENAÏM, H BERMENT, A LANGER, M MOHALLEM, S ENGERAND, C DE MAULMONT, P CHEREL

- **Retrospective study**
- 492 newly diagnosed breast cancers
- Identification of **65 supplementary lesions** (mass 48%; microcalcifications 43%) in 62 patients
 - Mammogramm n=33 (50%)
 - Ultrasound n=21 (33%)
 - Mammo + Ultrasound n=8 (13%)
 - MRI n=3 (4%)
- Indication of biopsy (13%)
 - **45 cancers (9%)** with 25 invasive carcinoma
 - 5 atypical lesions (1%)
 - 15 benign lesions (3%)
- **In 48 cases (10%), the radiological review modified the therapeutic strategy.**

Conclusion

- Radiological review in the pretherapeutic management of breast cancer appears of a great interest to detect supplementary lesions which may modify the therapeutic strategy.
- Interest of ultrasound+++
- Multidisciplinary approach
- *Systematic review of mammograms + ultrasound +/- other additional imaging in all breast carcinomas*

→ But what impact on survival?