Patients who were suspected of having metastatic breast cancer and underwent FDG PET/CT from June 2005 to December 2012 (n = 148)

Excluded patients (n = 94)

- False positive on PET/CT (i.e. finally not MBC, n = 5)
- Receiving chemotherapy within 30 days before FDG PET/CT (n = 3)
- History of previous MBC* (n = 65)
  - Bone metastasis (n = 37)
  - Lung metastasis (n = 36)
  - Lymph node metastasis (n = 30)
  - Liver metastasis (n = 15)
  - Pleural dissemination (n = 1)
  - Peritoneal dissemination (n = 1)
  - Fibrosarcoma (in irradiated fields) (n = 2)

  *33/65 patients of had two or more metastatic sites

- History of previous other malignancy (n = 2, Rectum 1, Lung 1)
- Fatal coexistent disease (n = 1)
- Lost to follow-up (n = 18)

Eligible patients (n = 54)

- at the first presentation of breast cancer; Group A (n = 24)
- at the first recurrence of breast cancer; Group B (n = 30)