European Journal of Cancer (2013) 49, 3579–3587

Available at www.sciencedirect.com

ScienceDirect

journal homepage: www.ejcancer.com

The requirements of a specialist Breast Centre

A.R.M. Wilson [a,*], L. Marotti [b], S. Bianchi [c], L. Biganzoli [d], S. Claassen [e], T. Decker [f], A. Frigerio [g], A. Goldhirsch [h], E.G. Gustafsson [i], R.E. Mansel [j], R. Orecchia [k], A. Ponti [g], P. Poortmans [l], P. Regitnig [m], M. Rosselli Del Turco [n], E.J.Th. Rutgers [o], C. van Asperen [p], C.A. Wells [q], Y. Wengström [i], L. Cataliotti [r]

[a] *Royal Marsden Hospital, London, UK*
[b] *Eusoma, Florence, Italy*
[c] *Careggi University Hospital, Florence, Italy*
[d] *Hospital of Prato, Prato, Italy*
[e] *Catharina Hospital, Eindhoven, The Netherlands*
[f] *Dietrich Bonhoeffer Medical Center, Neubrandeburg, Germany*
[g] *CPO Piemonte, Centro Prevenzione Oncologica, Turin, Italy*
[h] *Consultant, Ospedale Italiano, Lugano, Switzerland*
[i] *Karolinska Institutet, Stockholm, Sweden*
[j] *Cardiff University, Cardiff, UK*
[k] *European Institute of Oncology, Milan, Italy*
[l] *Verbeeten Institute, Tilburg, The Netherlands*
[m] *Medical University of Graz, Graz, Austria*
[n] *Radiology, Rome, Italy*
[o] *Netherlands Cancer Institute, Amsterdam, The Netherlands*
[p] *Leiden University Medical Center, Leiden, The Netherlands*
[q] *University College London Hospital, London, UK*
[r] *University of Florence, Florence, Italy*

Available online 19 August 2013

KEYWORDS
Eusoma
Breast Centre
Breast cancer care
Multidisciplinary approach
Data collection
audit
Quality of care

Abstract ***Introduction:*** In recognition of the advances and evidence based changes in clinical practice that have occurred in recent years and taking into account the knowledge and experience accumulated through the voluntary breast unit certification programme, Eusoma has produced this up-dated and revised guidelines on the requirements of a Specialist Breast Centre (BC).

Methods: The content of these guidelines is based on evidence from the recent relevant peer reviewed literature and the consensus of a multidisciplinary team of European experts. The guidelines define the requirements for each breast service and for the specialists who work in specialist Breast Centres.

* *Corresponding author:* Tel.: +44 7703311763; fax: +39 055 5530281.
E-mail address: robinwilson@nhs.net (A.R.M. Wilson).

http://dx.doi.org/10.1016/j.ejca.2013.07.017

Quality indicator
Performance
Breast specialist

Results: The guidelines identify the minimum requirements needed to set up a BC, these being an integrated Breast Centre, dealing with a sufficient number of cases to allow effective working and continuing expertise, dedicated specialists working with a multidisciplinary approach, providing all services throughout the patients pathway and data collection and audit. It is essential that the BC also guarantees the continuity of care for patients with advanced (metastatic) disease offering treatments according to multidisciplinary competencies and a high quality palliative care service. The BC must ensure that comprehensive support and expertise may be needed, not only through the core BC team, but also ensure that all other medical and paramedical expertise that may be necessary depending on the individual case are freely available, referring the patient to the specific care provider depending on the problem.

Conclusions: Applying minimum requirements and quality indicators is essential to improve organisation, performance and outcome in breast care. Efficacy and compliance have to be constantly monitored to evaluate the quality of patient care and to allow appropriate corrective actions leading to improvements in patient care.

1. Introduction

In 2000 Eusoma, the European Society of Breast Cancer Specialists, published a position paper 'The Requirements of a Specialist Breast Unit' [1]. This document represented the starting point towards accomplishing of what was demanded by the consensus statement [2] of the first European Breast Cancer Conference (EBCC1) that all women have access to fully equipped multidisciplinary and multiprofessional breast clinics based on populations of around 250,000 and that quality assurance programmes for breast services should become mandatory.

This paper has now been widely accepted and recognised as a benchmark for the set-up of a Breast Centre.

The European Parliament in its 2003 and 2006 Resolutions on Breast Cancer refer to this Eusoma paper in its recommendations that breast disease is diagnosed and treated in dedicated Breast Centres [3,4].

Eusoma has decided to up-date and revise its paper, taking into account advances in diagnosis and treatment and evidence based changes in practice that have occurred in recent years with respect to the organisation of a Breast Centre and the experience collected through the voluntary certification process.

The objectives of this paper is to define the organisational model for a Breast Centre, the minimum standards for the resources, expertise and data audit required of specialist Breast Centres to ensure that they provide high quality care to all women with breast cancer.

The main concept continues to be the multidisciplinary approach [5] to breast cancer care provided by health care professionals that are specialists in and dedicated to breast diagnosis, treatment and long-term care.

2. Definitions

Breast Centre: Is the place where breast cancer is diagnosed and treated. It has to provide all the services necessary, from genetics and prevention, through the treatment of the primary tumour, to care of advanced disease, palliation and survivorship.

The Breast Centre is made up by a cohesive group of dedicated breast cancer specialists working together as a multidisciplinary team with access to all the facilities required to deliver high quality care throughout the breast cancer pathway. This group does not necessarily have to be a geographically single entity, as the Breast Centre can be made up by services and specialists from more than one hospital, within the same geographical area, allowing for close multidisciplinary working and guarantee easy access to all the necessary services.

Guidelines: Recommendations, including local organisational aspects, for the diagnosis and management of breast cancer at all stages, including surveillance and long-term follow up.

Breast audit: Data monitoring and multidisciplinary discussion of breast quality indicator results and benchmarking for the purpose of identifying any critical issues and taking appropriate corrective measures, including designing new or revision of current guidelines.

Breast multidisciplinary meeting (MDM): Meeting of the core breast health professionals from the different disciplines to evaluate and plan patient care at any step of the diagnostic and treatment process.

Breast clinic: Used to mean a session, at which a number of breast patients are seen for clinical examination and/or investigations, counselling, etc.

Breast specialist: A person certified in her/his own discipline and fully trained in breast disease.

Breast core team member: Radiologist, radiographer, surgeon, reconstructive surgeon, pathologist, medical oncologist, radiation oncologist, breast care nurse and data manager consistently spending at least part of their working time in breast cancer (see sections on the different specialties for the expected working time recommendations).

Breast radiologist: A specialist in the imaging for diagnosis (including interventional procedures), further assessment and follow up of breast cancer patients.

Breast radiographer: A technician that is specialist in performing mammography and committed to achieving mammographic quality.

Breast surgeon and reconstructive surgeon: A specialist in general surgery, reconstructive surgery or gynaecology with a special interest in breast disease.

Breast pathologist: A board certified specialist in pathology with a special interest to breast disease.

Breast medical oncologist: A specialist in medical oncology with a special interest in breast disease.

Breast radiation oncologist: A specialist in radiation oncology with a special interest in breast disease.

Breast clinical oncologist: In some countries clinical oncologists carry out both radiation therapy and medical treatment. In the remaining of this paper, clinical oncology can be read wherever medical or radiation oncologist is written.

Breast care nurse: A nurse with specialist training in breast care nursing.

Breast data manager: A trained and dedicated person responsible for breast data management.

Non-core team members: Specialists who are consulted during the breast cancer patient management, who are not routinely involved in breast cancer care of each patient.

Clinical geneticist: A medical specialist concerned with the assessment of genetic risk and counselling for individuals or families with increased risk of breast cancer.

Psychologist: Dedicated to the psychological support to breast patients. Not usually medically qualified and therefore not authorised to prescribe pharmacological therapies.

Psychiatrist: Medically qualified specialist in psychological and pharmacological treatment of patients with psychiatric and psychological problems.

Physiotherapist: Dedicated to the physical support of patients after breast surgery.

Lymphatic drainage specialist: Dedicated to treat specifically problems related to disturbed lymphatic drainage after treatment in breast cancer patients.

Breast care worker: Qualified care provider (other than nurse; e.g. radiation therapy technologist), trained to give psychological support to breast cancer patients and to act during treatment (e.g. radiation therapy) and follow up as link between patients and the breast team.

3. General requirements

3.1. Breast Centre

There must be an official formal document (that complies with any national regulations) that demonstrates the set-up of the Breast Centre.

The Breast Centre is encouraged to make a cost evaluation of its activity on a yearly basis.

3.2. Critical mass

A Breast Centre must be of sufficient size to have at least 150 [6–8] newly diagnosed cases of primary breast cancer (at all ages and stages together) coming under its care each year, on a population base of about 250.000 [2,9].

The reason for recommending a minimum number is to ensure a caseload sufficient to maintain expertise for each team member and to ensure cost-effective working of the Breast Centre [8–11]. There is now also good data that shows that breast cancer survival is related to the number of cases treated per annum [12].

Cases to be counted may have been diagnosed elsewhere, but without receiving any breast cancer treatment elsewhere.

All primary treatments must be carried out under the direction of the Breast Centre (surgery must be carried out in the Breast Centre, adjuvant therapies must be agreed at the MDM by the Breast Centre team but may be given in another site e.g. radiation oncology and chemotherapy).

3.3. Clinical lead

The Breast Centre must have a nominated Clinical lead, a medically qualified doctor from any specialty within the core team. This person is responsible for ensuring the multidisciplinary approach, the full involvement of the breast experts from the core disciplines and their regular participation in the MDMs, ensuring appropriate levels of training and continuing medical education by the team members, breast related research activity, performance based on breast cancer quality indicators, data collection, etc.

3.4. Protocols

The Breast Centre must have written clinical protocols, adapted for local use from international or national recommendations, including local organisational aspects that define the Centre's requirements for the diagnosis and the management of breast cancer at all stages (primary and advanced cancer), up to and including follow up. All protocols must be agreed upon by the core team members and should be formally reviewed on an annual basis. New protocols and protocol amendments must be discussed and formally recorded by the core team at its audit meetings. While these protocols will define general requirements, the multidisciplinary team should especially target care, taking into account the personal requirements of each individual patient.

3.5. ***Audit***

The Breast Centre must have a database for the purpose of monitoring quality indicators [13] and for

research. Data that should be recorded in the database are related to: source of referral (screening programme, spontaneous screening, symptomatic), clinical diagnosis, pathological diagnosis, primary treatment and clinical outcomes.

Data must include information on all primary cancers. It is recommended that Breast Centres also record in the database or in a register all surgical operations performed on what is known to be or proves to be benign disease.

If breast screening is part of the service, the Centre should record whether a case is screen detected or is an interval case (a breast cancer detected after a normal screening outcome before the next scheduled screening examination) and document this information in the data monitoring system accordingly.

Breast Centres must formally identify a data manager who has responsibility for ensuring that all relevant and required data are collected, recorded and analysed. Data should preferably be collected contemporaneously during the patient management process. The data manager must work under the supervision of a designated core team clinician (as identified by the Clinical lead).

The Breast Centre should also participate in external benchmarking activities, (the comparison of Centre's results with those of other Breast Centres agreeing to participate in this activity).

The Breast Centre team must hold at least annually a formal performance and clinical protocol review meeting to monitor the Centre's data, using these for assessing pre – defined topics and for designing and amending protocols and QA systems. All breast team core members must participate in the formal performance and clinical protocol review meeting. Non-core team members should also be encouraged to attend this meeting.

Minutes of all items discussed and a list of the participants at this meeting must be kept.

The Breast Centre must achieve the minimum standards for the mandatory quality indicators as defined by Eusoma [13]. If a minimum standard is not achieved the team must agree and document what appropriate corrective measures will be applied and then compliance to the standard must be re-evaluated at an appropriate time interval.

3.6. Multidisciplinary case management meetings

The Breast Centre must hold at least weekly a multidisciplinary case management meeting (MDM) to discuss diagnostic preoperative and postoperative cases, as well as any other issue related to breast cancer patients, which requires multidisciplinary discussion [14]. The Breast Centre must discuss at least 90% of all breast cancer cases at MDM. All cases with needle or surgical biopsy and those cases without a definitive diagnosis must be discussed prospectively before any treatment is given. The pre-operative MDM should consider three key components that influence decision making: patient-related factors, tumour related factor, treatment options [9]. At the discussion of pre-operative breast cancer cases, the following team members must be present: radiologist, pathologist, medical oncologist, surgeon/oncoplastic surgeon, breast care nurse and radiation oncologist. At the discussion of post-operative cases, the following core team members must be present: pathologist, surgeon, medical oncologist, radiation oncologist and breast nurse. The other team members should be encouraged to attend and, in any case, should be reachable for consultation. The Breast Centre's database should be used at MDM for data retrieval and recording. Evidence on decisions taken for each patient at the MDM must be formally recorded. The team member's participation in each MDM must be formally recorded.

3.7. Screening

It is recommended that where possible population based Breast Screening programmes be based within or be closely associated with a Breast Centre and that the radiologists are involved in both screening and symptomatic breast imaging.

If the screening programme is not based within the Breast Centre, the Centre should ensure that adequate written information is received from the screening programme to ensure that each case referred is managed effectively without unnecessary repetition of diagnostic procedures.

3.8. Communication of the diagnosis, treatment plan and waiting time

It is recommended that the diagnosis is given to the patient as soon as possible. A preliminary communication on the diagnosis can be given to the patient by each specialist according to their competence. Following the appropriate MDM discussion to confirm the diagnosis and plan the treatment the results should be given to the patient by the clinician who will take primary responsibility for providing this treatment to this patient. A breast care nurse must be available to discuss fully with the patient the options for treatment and to give emotional support. A suitable room with sufficient privacy should be available.

Each patient has to be fully informed about each step in the diagnostic and therapeutic pathway and must be given adequate time to consider the options and make an informed decision.

A diagnosis of breast cancer must not be given to a patient by letter or on the telephone, unless at the specific request of the patient in exceptional circumstances, given adequate and fully informed choice.

Patients should commence the primary treatment within 4 weeks from the definitive diagnosis or from the first consultation at the Breast Centre if diagnosed elsewhere.

3.9. Patient information

Women must be offered clear verbal and written information (leaflets) that describes the diagnostic and treatment options. It is recommended that these leaflets are developed by, and personalised for, the Breast Centre. The Breast Centre should also provide written information concerning local outpatient support groups and advocacy organisations. It is recommended that patients are provided with a list of their rights as outlined in the breast cancer resolution of the European Parliament [3,4].

3.10. Teaching

The Breast Centre should provide teaching, whether for junior staff members or students, on a national or international basis. Some Breast Centres may particularly concentrate on certain areas (e.g.) reconstruction, screening, pathology, etc. The Breast Centre should organise at least one teaching course per year at local, regional or national level.

3.11. Research

Research is one of the essential parts of training specialists [15]. Breast Centres are encouraged to be involved in translational research.

The Breast Centre should record the numbers of patients participating in clinical trials and collect details of any other research activities, such as evaluation of newly introduced techniques. The Breast Centre should aim to enrol at least 10% of all patients into clinical trials, assuming fully informed patient choice.

4. Core team

All core team members should comply with the recommendations and standards defined in the Eusoma guidelines for specialised Health Professionals [15].

4.1. Breast radiology

The Breast Centre must have at least two dedicated breast radiologists.

To be considered a breast specialist each radiologist of the Breast Centre must spend at least 30% of his/her working time in breast imaging. This 30% has to be calculated on the basis of the standard weekly full working time as defined in the national collective agreement on working times.

Where possible radiologists involved in the assessment of breast patients should participate in both breast screening and the imaging of symptomatic breast problems.

They should participate in the related national or regional radiology quality assurance schemes.

Each breast radiologist working in the Breast Centre must read a minimum of 1000 mammography cases per year (5000 cases per year for those participating in a screening programme) [16].

Double reading of mammograms should be encouraged for both screening and symptomatic mammography when the mammogram workload is less than 3000 per year.

With regard to patients referred from outside the Breast Centre, the outside mammograms should be reviewed by the Breast Centre radiologists.

Each radiologist must attend at least one diagnostic clinic per week for symptomatic patients or breast screening recall further assessment.

The Breast Centre must have all the necessary imaging equipment for complete and adequate breast diagnosis:

Mammography Unit (preferable digital)
Stereotactic biopsy attachment and/or dedicated prone biopsy table
Ultrasound equipped with a small parts probe $\geqslant$10 MHz

It is recommended that this equipment is not older than 10 years, unless carefully maintained and complying with national and/or international standards.

Quality control of all equipment used for breast imaging must be routinely performed, according to the relevant national protocols and/or the European Guidelines [16].

The Unit must be able to perform the following examinations:

Clinical examination
Mammography
Ultrasound of the breast and axilla

Core biopsy – free-hand, ultrasound guided and X-ray guided. (If this is not available within the Breast Centre there must be a formal agreement with a local diagnostic service).

Breast MRI (If not available within the hospital, the Unit must have an agreement with a local diagnostic service that provides breast MRI).

Non-surgical diagnosis by needle biopsy of both benign and malignant disease is the expected standard. Primary diagnosis using open surgical biopsy must be considered exceptional.

Core biopsy (CB) is considered to be the preferred technique for sampling the breast.

Fine Needle Aspiration Cytology (FNAC) is the technique primarily used for sampling axillary lymph nodes.

The Breast Centre is also encouraged to perform vacuum assisted biopsy (VAB) under ultrasound, X-ray or MRI guidance.

The Breast Centre must use a single formal imaging risk classification (e.g. BIRADS™ or the European Classification).

Radiographers: Only radiographers with a special training in breast diagnosis should be allowed to perform mammography.

The Unit must have at least 2 dedicated radiographers, each performing at least 1000 mammograms per year [16].

The radiographers should also attend refresher courses at least every 3 years [16].

The Breast Centre must have protocols detailing how the periodical review of the technical performance of the radiographers is carried out.

Radiographers should participate in regular audits of their technical performance.

Breast Centres using either analogue film/screen mammography, Computed Radiography mammography (CR mammography) and full digital mammography must have protocols on how to carry out quality control on a daily basis and should follow the guidelines on equipment quality control as detailed in the European Guidelines.

4.2. Breast surgery and reconstructive surgery (oncoplastic surgery)

The Breast Centre must have at least two dedicated breast surgeons.

In the Breast Centre all surgeons (general, reconstructive or gynaecologist) operating on breast pathology must be dedicated and specially trained in breast surgery. To be considered a breast specialist the surgeon must spend at least 50% of his/her working time in breast disease. This 50% has to be calculated on the basis of the standard weekly full working time as defined in the national collective agreement on working times. To be considered a specialist breast surgeon and a member of the core team, each surgeon of the Breast Centre must personally carry out the primary surgery on at least 50 newly diagnosed cancers per annum [5].

If the Breast Centre has breast surgeons in training, those breast surgeons responsible for supervising the trainees during surgical procedures might perform less than 50 primary cases as first operator. In this case official documentation on their role as second operator supervising the trainee must be available.

The increasing demand for reconstructive procedures has fostered the development of oncoplastic surgery, i.e. the combination between plastic and oncology surgery, to obtain a good aesthetic result and optimising oncologic outcomes [6]. Oncoplastic techniques for breast reconstruction are becoming a new standard of care in the management of breast cancer patients [9].

The breast surgeons in the team should be able to undertake basic reconstruction, when required, and oncoplastic surgery.

The Breast Centre must make arrangements with one or two nominated reconstructive surgeons with a special interest in breast reconstructive and reshaping techniques.

At the Breast Centre sentinel lymph node biopsy procedures must be available.

The Breast Centre should also advise and where necessary treat women with benign disease, e.g. cysts, fibroadenoma, mastalgia, inflammatory conditions, etc.

4.3. Breast pathology

The Breast Centre must have at least two dedicated breast pathologists (one of whom should be nominated as the breast pathology lead for the team). To be considered a breast specialist, the lead pathologist must spend 50% of his/her working time in breast disease and the other dedicated pathologists at least 25%. This 25% and 50% has to be calculated on the basis of the standard weekly full working time as defined in the national collective agreement on working times.

The specialist breast pathologists should be responsible for all breast pathology and cytology dealt with by the Breast Centre.

All specialist pathologists reporting breast cancer must report on at least 50 primary breast cancer resections per year [17].

The dedicated breast pathologists should take part in regional, national or European breast cancer reporting quality assurance schemes.

The pathology laboratory must be equipped with: microscopes, cryocut histoprocessors, microtome staining machines and immunostainers. The equipment should be replaced every 10 years unless carefully maintained and complying with national and/or international standards.

With regard to workup of the specimen, items included in the report, nomenclature, special studies (immunohistorchemistry for diagnosis, immunohistochemistry for oestrogen receptor +/– progesterone receptor and access to HER2/neu testing), the dedicated breast pathologists should fulfil the requirements set by the European Guidelines [16].

For reporting core biopsies the unit must use the B-classification as described in the European Guidelines [16].

Double reading of biopsies is encouraged.

It is recommended that the Breast Centre has the ability to show the histology of special cases at the MDM, preferably from slides (videomicroscope or scanned slide) to support the understanding of difficult histopathological reports.

The pathology laboratory must archive slides, blocks and histopathological reports following the relevant national guidance but, as a minimum, for over 20 years slides and blocks and reports for 30 years.

Breast pathologists should be familiar with their national and/or European performance quality standards and guidelines.

4.4. Breast medical oncology

The Breast Centre must have at least two medical oncologists dedicated to breast cancer.

To be considered a breast specialist, the medical oncologist must spend 50% of his/her working time in breast cancer. This 50% has to be calculated on the basis of the standard weekly full working time as defined in the national collective agreement on working times.

Supervision of systemic therapy and or decision-making process for adjuvant and neoadjuvant treatments has to be supervised by the dedicated medical oncologists.

If medical oncology Unit is not available within the hospital, the Breast Centre must have an agreement with a medical oncology unit and the medical oncologist must attend MDMs at the Breast Centre.

Outcome information on all patients treated with systemic therapy should be collected, even if patients are treated outside the Breast Centre.

4.5. Breast radiation oncology

The Breast Centre must have at least two radiation oncologists dedicated to breast cancer.

To be considered a breast specialist, the radiation oncologist must spend at least 40% of his/her working time in breast disease. This 40% has to be calculated on the basis of the standard weekly full working time as defined in the national collective agreement on working times.

The minimum equipment in a radiation oncology unit must include at least two megavoltage units, a simulator (preferably a computed tomography simulator) and a computerised 3D planning system.

The radiation oncology unit must have a quality assurance programme for the entire process, including for the machines/infrastructure. If specific equipment or working procedures are in place for treating breast cancer patients, this has to be included in the quality assurance programme.

The radiation oncology unit must comply with national protocols with regard to quality assurance.

Radiotherapy planning must be done according to optimised, preferably 3D, procedures (using tools such as dose volume histograms) taking into account predefined constraints for organs at risk (including as a minimum heart and lungs).

Experience in special techniques such as forward planned dose homogenisation (Intensity-Modulated Radiation Therapy –IMRT like), partial breast irradiation, treatment under respiratory control and 3D brachytherapy is recommended.

If the radiation oncology unit is not available within the hospital, the Breast Centre must have an agreement with a radiation oncology unit and the radiation oncologist must attend MDMs at the Breast Centre.

Outcome information on all patients treated with a radiation therapy should be collected, even if patients are treated outside the Breast Centre.

4.6. Breast care nursing

At least two breast care nurses are needed per Breast Centre.

To be considered a breast specialist, the nurse must be dedicated full time to breast disease. Full time is calculated on the basis of the standard weekly full working time as defined in the national collective agreement on working times.

Breast care nurses must attend the MDMs.

Breast care nurses must be available throughout the patient pathway from the diagnosis through treatment and follow up, to offer practical advice, emotional support, further explanation with regard to treatment plan and educational information on side-effects [18].

Breast care nurses must be available at the time of communication of diagnosis and in case of communication of recurrent or advanced disease. For this purpose the breast nurse must be present during the clinic or must meet the patient immediately afterwards or however maximum of one week after diagnosis.

Breast care nurses should also be available at follow up clinics.

Breast care nurses must be involved in the development of protocols, patient pathways and information material.

5. Other services and non-core team members

5.1. Clinics

Dedicated clinics run by Breast Centre core team members guarantee patients continuity of care. All consultations for breast disease must be done in dedicated clinics, i.e. new patient clinics, advanced patient clinics and follow up clinics must be separate, i.e. to each of them a specific slot of time and location must be assigned.

It is desirable that the Breast Centre is able to offer advice with regard to dietary, nutrition and complementary medicine.

5.2. Clinical genetics clinic

The Breast Centre must have a dedicated clinical geneticist responsible for the clinical genetics clinic. Advice from other specialists, such as breast and reconstructive surgeon, breast radiologist, gynaecologist and psychologist may be required. The clinical geneticist, if necessary, has to ensure immediate consultation with the other Breast Centre team members.

Breast Centres that are not running a genetic service must have in place an agreement with a hospital where this service is available. Close interaction between the Breast Centre and the genetics service is required to ensure continuity of care.

The patient data from these clinics should be formally recorded in an appropriate database and this team should be actively involved in research.

Genetic testing (for Breast Cancer - BRCA mutation) must be available when required and a molecular geneticist should be accessible for consultation by the specialists in the clinic.

Risk assessment counselling and DNA testing for BRCA mutations in a selected high risk group should be offered, in accordance with unit protocols.

The clinical genetics service should offer:

Genetic analysis: Genetic testing should include complete sequencing of coding regions, either directly or after a screening method. Specific techniques to detect duplications or deletions of one or more exons may be indicated.
Diagnostic Surveillance: The Breast Centre should have written protocols where diagnostic surveillance is specially considered for high risk women including screening MRI according to the level of risk.
Other intervention: The Breast Centre should have a written protocol for prophylactic operations and chemoprevention.
Psychological support: Psychological support should be available and given to patients when necessary to support them through their assimilation with their genetic risk and to support their individual decision-making.

5.3. New patient clinics

Women referred after screening or with symptoms that are possibly related to breast cancer should be seen within maximum 3 or 4 calender days. Clinics to which patients are referred or self-referred must be staffed by a surgeon (or equivalent clinician) or a radiologist from the breast care team. Multidisciplinary working should allow all standard investigations for triple assessment (clinical examination and all appropriate imaging and tissue diagnostic procedures) to be completed at one visit.

5.4. Advanced breast cancer clinics

Advanced breast cancer patients must be seen within the Breast Centre. These clinics must be separate from the general oncology clinics and attended by a medical oncologist and/or a radiation oncologist. The surgeon should be available on request.

5.5. Second opinion

The Breast Centre should offer the possibility to the patient to consult the different specialists in the Breast Centre for a second opinion. If a patient requests an external second-opinion this should be facilitated.

5.6. Psychological support

A nominated clinical psychologist (psycho-oncologist) with special experience in seeing breast patients must be available at the Breast Centre.

If the patient is experiencing psychological morbidity that cannot be dealt with effectively by members (usually breast care nurse or psycho-oncologist) of the Breast Centre team, she should be referred to a psychiatrist with whom particular arrangements to see breast patients for the Breast Centre are made.

Regular support (advice, counselling and psychological help) is given by breast care nurses and psychologically professionally trained persons with expertise in breast cancer.

5.7. Follow-up of primary breast cancer

Follow up should be done within the Breast Centre by members of the Breast Centre core team, according to the local organisation and patient wish.

The Breast Centre should offer the possibility to proceed with all necessary imaging investigation procedures at the same visit.

The Breast Centre must give advice and support to the patient with symptoms and complaints due to hormonal therapy (ex: osteoporosis, gynaecological problems, etc.) referring the patient to the specific health care giver depending on the problem.

If the follow up is not carried out by the Breast Centre, the Centre should collect information at least yearly and include these data in the Breast Centre's database.

5.8. Prosthesis

There should be a prosthesis fitting service within the centre or referral to a service outside the hospital should be given to the patient.

5.9. Physiotherapy and lymphoedema

There must be an identified physiotherapist, lymphatic drainage specialist or a breast care nurse for the treatment of lymphoedema and its related sequelae.

Physiotherapy and if necessary lymphatic drainage therapy must be available for the postoperative recovery period to ensure good shoulder mobility, etc.

A dedicated revalidation programme for cancer patients who require assistance in the recovery of functional status after treatment should be available.

5.10. Nuclear medicine

The Breast Centre must have access to a nuclear medicine service where specialists take care of all the procedures and examinations relevant in breast cancer care.

5.11. Palliative care

The Breast Centre must be able to treat patients with advanced breast cancer including loco-regional recurrences and metastatic disease, offering treatments according to multidisciplinary competencies, as this significantly improves quality of life.

With regard to end of life care the Breast Centre must ensure that a high quality palliative care service is available and, if possible, links with the local network for home assistance (ex. hospices, home care organisations, etc.).

Conflict of interest statement

None declared.

References

[1] Blamey RW, Cataliotti L, et al. The requirements of a specialist breast unit. *Eur J Cancer* 2000;**36**:2288–93.

[2] Cataliotti L, Costa A, Daly PA, et al. Florence statement on breast cancer, 1998: forging the way ahead for more research on and better care in breast cancer. *Eur J Cancer* 1999;**35**(1):14–5.

[3] European Parliament resolution on breast cancer in the European Union (2002/2279(INI)). P5_TA(2003) 0270.

[4] European Parliament resolution on breast cancer in the enlarged European Union (RE/636089EN.doc). B6-0528/2006.

[5] Kesson EM, Allardice GM, George WD, et al. Effects of multidisciplinary team working on breast cancer survival: retrospective, comparative, interventional cohort study of 13722 women. *BMJ* 2012;**344**:1–9.

[6] Odofin O, Harris K, Paramanathan N, et al. The impact of providing an oncoplastic service on the workload of a specialist breast unit. *Breast J* 2011;**17**(4):371–6.

[7] Roohan PJ, Bickell NA, Baptiste MS, et al. Hospital volume differences and five year survival from breast cancer. *Am J Public Health* 1998;**88**(3):454–7.

[8] Vrijens F, Stordeur S, Beirens K, Devriese S, Van Eycken E, Vlayen J. Effect of hospital volume on processes of care and 5-year survival after breast cancer: a population-based study on 25000 women. *Breast* 2012;**21**(3):261–6.

[9] Rainsbury D, Willett A, on behalf of BAPRAS. British Association of Plastic Reconstructive and Aesthetic Surgeons. Oncoplastic breast reconstruction guidelines for best practice. Association of Breast Surgery; 2012, 1–64. www.associationofbreastsurgery.org.uk.

[10] Grilli R, Minozzi S, Tinazzi A, Labianca R, Sheldon TA, Liberati A. Do specialists do it better? The impact of specialization on the processes and outcomes of care for cancer patients. *Ann Oncol* 1998;**9**:365–74.

[11] Hoffmann J. Analysis of surgical and diagnostic quality at a specialist breast unit. *Breast* 2006;**15**:490–7.

[12] Kwaliteitsindicatoren in oncologie: borstkanker KCE reports 150A; Federaal Kenniscentrum voor de Gezondheidszorg, Centre fédéral d'expertise des soins de santé; 2010.

[13] Rosselli Del Turco M, Ponti A, Bick U, et al. Quality indicators in breast cancer care. *Eur J Cancer* 2010;**46**:2344–56.

[14] Newman E, Guest AB, Helvie MA, et al. Changes in surgical management resulting from case review at a breast cancer multidisciplinary tumor board. *Cancer* 2006;**107**(10):2346–51.

[15] Cataliotti L, De Wolf C, Holland R. Guidelines on the standards for the training of specialised health professionals dealing with breast cancer. *Eur J Cancer* 2007;**43**:660–75.

[16] Perry N, Broeders M, De Wolf C, et al. *European guidelines for quality assurance in breast cancer screening and diagnosis*. 4th ed. European Community; 2006.

[17] National Coordinating group for breast screening pathology. *Guidelines for breast pathology services*. NHSBSP Publications; 1999.

[18] Eicher M, Kadmon I, Claassen S. Training breast care nurses throughout Europe: the EONS postbasic curriculum for breast cancer nursing. *Eur J Cancer* 2012;**48**:1257–62.