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100 European core quality standards for cancer care and research centres

There have been calls for consensus around defining quality standards for cancer care, treatment, and research in Europe, with a focus on cancer hospitals, centres, and networks. Although cancer survival is generally improving, large variation in cancer survival between countries remains, as shown by results in the EUROCARE-5 study.[1]

The European Commissioner for Health and Food Safety has launched Europe's Beating Cancer Plan. In addition, a cancer mission is being drafted by the European Commission,[2] with some objectives most likely to be focused on the need to ensure quality of treatment, care, and research, and to create more comprehensive cancer centres and infrastructure.[3,4]

In Europe, many cancer centres, which act as hubs of interlocking clinical research networks, provide state-of-the-art cancer services. Thus, mechanisms for monitoring compliance with high-quality standards of care and translational research for cancer centres across Europe are crucial. Furthermore, some EU member states lag behind in the formation of comprehensive cancer centres. Therefore, an aim for both the cancer mission and Beating Cancer Plan could be to establish at least one comprehensive cancer centre or large clinical centre in each small EU member state, and to have one comprehensive cancer centre for every 5–10 million people in the population in larger EU member states, as part of an integrated infrastructure.[5]

In 2008, the Organisation of European Cancer Institutes (OECI) created a quality assurance Accreditation and Designation Programme for cancer centres,[6] which includes 50 of the largest cancer centres in 14 of 27 EU member states, plus Norway and the UK. Collectively, these centres produce more than 12 400 peer-reviewed publications on cancer research annually, have a total annual research budget of over €1 billion, and have treated more than 1 million new patients since accreditation. Although these centres treat only 10% of patients diagnosed with cancer in the EU each year, their effect on the quality of cancer care and research is substantial, as they are considered as national reference centres.


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The Accreditation and Designation Programme focuses on institutional quality and capabilities, with the objective of providing comprehensive accreditation for quality oncology care, including prevention, care, research, education, networking, and patient involvement. The programme addresses fundamental issues in cancer: the integration of research and clinical care, and the translation of research findings into practice changes in cancer treatment. Inclusion of these issues is a unique feature of this OECI programme, compared with cancer accreditation systems in the USA and Germany, where clinical care and cancer research are generally accredited separately. In addition, the OECI standards have been accredited by the International Society for Quality in Health Care.

The 50 participating cancer centres are shown in the appendix (p 1). Distinguishing factors between the two designation categories (comprehensive cancer

See Online for appendix

centres and cancer centres) relate to the degree of translational research, measured by academic output and the range of clinical studies, and the scale of clinical activity. The accreditation process consists of self-assessment of the centre against quality standards followed by an independent assessment by a multidisciplinary team selected from other cancer centres. An important part of this process is the subsequently agreed improvement plan.

OECI launched a second major revision of the quality standards in 2018, resulting in a total of 344 quality standards, of which 100 were designated as core. The OECI quality standards conform to the best international standard-setting practice,[7] consisting of a specific and objective indicative statement, with which compliance can be scored (in a graded system according to the Deming cycle), self-assessed by centres, and externally evaluated. It was also intended that each standard should be based on international standards of best practice from cancer centres and evidence of effectiveness. Further details of the methods used are in the appendix (pp 1–4).

The OECI set of standards was reviewed against other published quality standards using a screening method on the basis of relevance for improving patient outcomes, feasibility in most cancer institutes and centres, capability of objective self-assessment and external review, and applicability to almost all cancers. New standards were added for molecular pathology, nuclear medicine, radiology, radiotherapy, and surgical oncology; and quality standards on prevention services, patient-centred care, patient involvement, and patient survivorship were strengthened. Core standards were defined as "fundamental to good quality of care or research, requiring structural evidence of compliance during the peer review at every 5 year re-accreditation".

A draft was created after matching the existing set of standards with major international standards and incorporating suggestions from the International Society for Quality in Health Care. An expert meeting was held on April 10, 2019, with participants from ten European societies and patient groups. The resulting output was sent for review to 94 OECI member centres for comment and input. Parallel selection of core standards was done throughout the process (appendix pp 2–3).

The whole set of revised quality standards and indicators has recently been published.[8] A set of 100 core standards (appendix pp 5–11), representing 27% of the full set of standards, is being implemented from Jan 1, 2020. The standards fall into nine chapters: governance of the cancer centre; organisation of quality systems; patient involvement and empowerment; multidisciplinarity; prevention and early detection; diagnosis; treatment and care; research; and education and training.

The 100 OECI core standards are designed to cover essential requirements for the whole patient pathway from commencement in a cancer centre or hospital, to all forms of treatment and aftercare, education and training, and research which is crucial to accelerate changes in clinical practice.

Fulfilling these standards within cancer centres and comprehensive cancer centres (with specific diagnostic and therapeutic interventions applied within the framework) will most likely be associated with better patient outcomes. In 2015, evidence of improved patient outcomes in larger specialist and comprehensive cancer centres was published in the USA,[9] but additional research in Europe is required.

The OECI programme has shown a positive effect on processes related to patient outcomes, for instance, on multidisciplinary team processes and systematic inclusion of patients in clinical trials. OECI can plot the improvement of a centre from before the accreditation, through the improvement plan, into implementation and evaluation. These positive effects on patient care will be documented in future research.

Regarding the scope of application of these core quality standards, it is important to consider the policy context. Both the European cancer mission and Beating Cancer Plan will probably encourage the creation of infrastructure, networks of cancer centres, and new specialist centres, including in central and eastern Europe. These initiatives will also encourage the practice of accreditation based on quality standards. New comprehensive cancer centres could be created through the formation of new centres from existing university medical centres and constituent universities or cancer research institutes. Centres that have already been formed in this way will be documented by OECI and published for wider learning.

Furthermore, establishing effective comprehensive cancer care networks,[10] with comprehensive cancer centres or large cancer centres as hubs, will be

fundamental to coordinating excellent care for a larger population. The effectiveness of these networks in providing equal access and high-quality care will need to be monitored against quality standards. OECI has developed a first set of such standards, which will be published soon and their effect will be evaluated. These standards will support important cancer policy objectives set by the EU, especially the aim to reduce variation in quality and access to treatment and clinical trials. The intent is that all patients with cancer in Europe should be treated in hospitals and centres that apply common quality standards.

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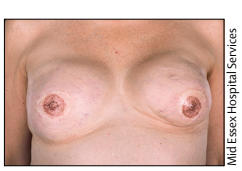
Should we worry about residual disease after mastectomy?



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Breast cancer is the most frequently diagnosed cancer in women, accounting for 30% of new cancer cases, and leads to the highest proportion (15%) of cancer deaths.[1] Surgical resection is the cornerstone of treatment with curative intent for patients with non-metastatic breast cancer, within comprehensive treatment from an integrated multidisciplinary team. The aim of resection is to remove all neoplastic tissue in the breast (both invasive cancer and ductal carcinoma in situ [DCIS]), to reduce the risk of further disease spread, including local and distant recurrence. At present, the widespread use of screening programmes and increasingly early diagnoses, improvements in pathological evaluation and diagnostics for planning surgery and radiotherapy, and advances in systemic therapy have resulted in a decreased incidence of local disease recurrence after resection, with 10-year actuarial rates lower than 5% after breast-conserving therapy or mastectomy.[2] Therefore, breast-conserving therapy is the preferred procedure for most breast cancer cases. However, in some cases, for example in extensive and multicentric disease, mastectomy remains indicated.

Modified radical mastectomy involves the removal of all breast tissue and part of the overlying skin including the nipple–areola complex. The need to improve patients' quality of life (reduction of psychological distress and avoidance of postmastectomy syndrome) led to the introduction of skin-sparing mastectomy and nipple-sparing mastectomy, allowing primary breast reconstruction in a one-stage procedure. Although initially reserved for risk-reducing procedures (eg, in *BRCA* mutation carriers before development of breast cancer), in the past two decades these techniques have become increasingly popular for the treatment of breast cancer, both invasive cancer and DCIS.

Skin-sparing mastectomy and nipple-sparing mastectomy keep a larger part of the native breast skin envelope, with an aim to match the shape of the natural