

**Key Performance Indicators Report  
for Symptomatic Breast Disease Services, 2010**

## **Foreword**

Improving the quality of symptomatic breast disease services in Ireland is a key priority for the National Cancer Control Programme (NCCP). Following centralisation of primary diagnostic and surgical services and the national quality review of symptomatic breast disease (SBD) services undertaken by the Health Information and Quality Authority (HIQA), the eight designated cancer centres, in conjunction with the NCCP, have put enormous efforts into improving the quality of SBD services delivered in each centre.

Designated centres with multidisciplinary teams have provided a significant advancement towards the integrated delivery of cancer services in the specialist centres. Prompt access to cancer services in these designated centres has been a key deliverable for the NCCP and a success story for the breast service.

As part of this change process, each designated cancer centre reports on a set of key performance indicators on a monthly, quarterly or annual basis to the NCCP. This is the first time that we have had national data on these indicators for symptomatic breast disease (SBD) services in Ireland.

The findings of this report greatly assist in providing assurance to patients attending our centres and to the NCCP that a high quality service is being provided by all eight of our designated cancer centres and further, that there is a high level of standardisation between centres in how patients with breast cancer are diagnosed and treated. I would like to acknowledge the clinical and managerial leadership in the designated cancer centres for their contribution to improving and streamlining symptomatic breast disease services for patients in Ireland.

A handwritten signature in black ink, reading "Susan O'Reilly". The signature is fluid and cursive, with a large, sweeping flourish at the end.

*National Director  
National Cancer Control Programme*

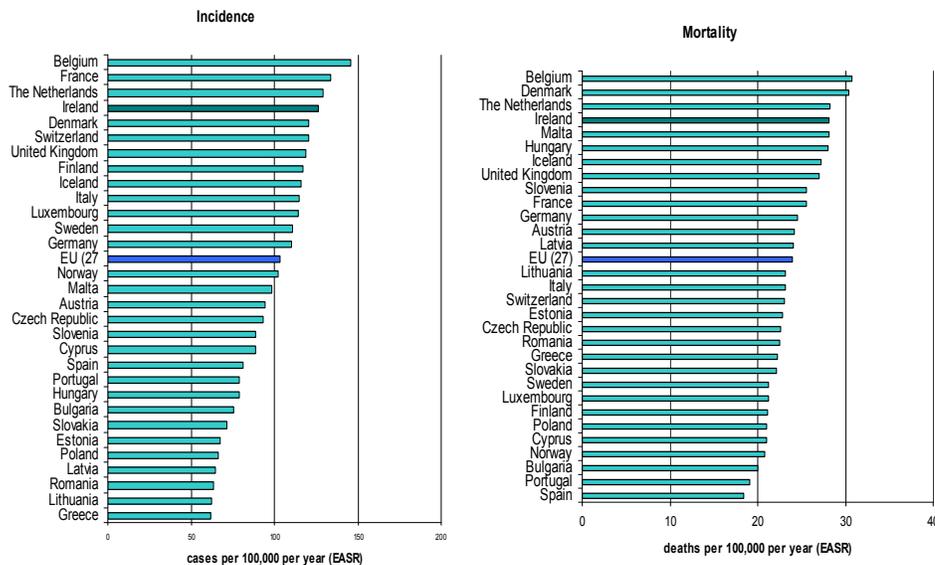
## Executive Summary

- Symptomatic breast disease (SBD) services in public hospitals are provided in designated cancer centres staffed by trained specialists in breast disease seeing sufficient volumes of patients to maintain skills and expertise.
- SBD services saw 12,553 urgently referred patients in 2010; over 95% of these patients were seen within two weeks of receipt of referral.
- SBD services saw 25,078 routinely referred patients; over 95% of these patients were seen within 12 weeks of receipt of referral.
- SBD services diagnosed 2,012 new breast cancers in 2010; this amounts to 67% of breast cancers diagnosed annually in Ireland, the remainder being identified either through the national breast screening programme BreastCheck or in the private sector.
- SBD services provided timely access to mammography and ultrasound examination of the breast; the majority of patients deemed urgent at first visit have imaging on the day of appointment; the majority of routine patients have imaging within 12 weeks of initial assessment
- Most patients have their cancer diagnosed without an operation. Virtually all patients have their management discussed at a multidisciplinary team meeting, the majority within 10 working days.
- Where surgery was the first treatment, just over 90% of patients had their surgery within 4 weeks of the date their management was discussed at a multidisciplinary team meeting
- Most centres were unable to provide timely access, as defined by the performance indicator target, to radiation oncology treatment. Delays were in part attributable to patient condition factors such as complications post surgery or chemotherapy. Insufficient capacity, particularly in Dublin, was also a factor and so, the opening of two new units in St. James and Beaumont Hospitals in 2011 is a welcome development. Centres are also reviewing patient flow from surgery and chemotherapy to radiation therapy so that avoidable factors contributing to delays are identified and managed.
- Most centres were unable to provide timely access, as defined by the performance indicator target, to chemotherapy. Patient condition factors were an important contributing factor to delays.
- The majority of pathology reports were complete in respect of different elements included in the report. Three centres were unable to provide reports in a timely fashion as defined by the performance indicator target. The difficulty in recruiting suitably qualified pathologists is a challenge for cancer services nationally.
- Information generated by monitoring of key performance indicators is integral to cancer centre participation in a continuous quality improvement cycle to improve outcomes for cancer patients. There is a cost in collecting such information routinely and it is important that the indicators and targets chosen are robust and can contribute meaningfully to service improvement. Some targets are currently being exceeded by all centres; some targets as currently set cannot be met due to patient condition factors. The experience gained from the first full year of reporting in 2010 will inform indicator selection and target setting for 2012.

## Introduction

Breast cancer is the most common cancer in women in Ireland with an annual average of 2,673 invasive cancers registered between 2007 and 2009 [1] and an additional annual average of 307 in-situ tumours. Breast cancer is the second highest cause of death from cancer in women. In 2007, it accounted for 614 deaths or 7.5% of all cancer deaths in Ireland. In 2008, female breast cancer incidence in Ireland was ranked fourth highest of 30 European countries - after Belgium, France and The Netherlands (Figure 1). This may reflect the development of organised screening in this country. Ireland was also fourth highest in terms of mortality from the disease after Belgium, Denmark and The Netherlands and had the same mortality rate as Malta and Hungary.

**Figure 1: Estimated cancer incidence and mortality rates in Europe 2008 – female breast cancer – European age standardised rates (EASR)**



Source: European Cancer Observatory - <http://eu-cancer.iarc.fr/>

Prior to the establishment of the National Cancer Control Programme (NCCP) in 2007, symptomatic breast disease (SBD) services were delivered in most of Ireland’s acute hospitals. Such a dispersal of services meant that few hospitals were in line with international best practice in terms of the volume of breast cancer cases that they diagnosed and managed. As part of its remit to create a framework for cancer control in Ireland, improving access and quality of symptomatic breast disease services were identified as key priorities for the NCCP.

In 2007, centralisation of symptomatic breast disease services commenced (Table1).

**Table 1. Schedule for centralisation of SBD services**

Date	Number of public hospitals providing SBD services
September 2007*	35
October 2007	22
January 2008	20
April 2008	19
October 2008	18
November 2008	17
April 2009	14
August 2009	12
October 2009	11
December 2009	10
January 2010	8 cancer centres plus a satellite in Letterkenny

\* Note: In September 2007, 17 hospitals were formally requested to discontinue SBD services though it was acknowledged that some of these hospitals had ceased in practice prior to that date.

By January 1<sup>st</sup> 2010, symptomatic breast disease clinics had been centralised in eight cancer centres with a satellite centre in Letterkenny, Co Donegal.<sup>1</sup> However, centralisation was only one component of the drive towards high quality services.

In 2007, a core document “*National Quality Assurance Standards for Symptomatic Breast Disease Services*” was published by the Health Information and Quality Authority (HIQA) as a blueprint for the development of high quality SBD services. In line with this document, and in anticipation of increased volume of patients being received by the eight designated cancer centres, additional funding was invested in the centres.

Following the designation of the eight cancer centres, HIQA undertook a national quality review of symptomatic breast disease services over a two and a half year period [2]. Findings from this quality review shaped the governance system and monitoring programme that was put in place by the NCCP in each of its designated cancer centres. Each SBD service in the eight designated cancer centres nominated a Lead Clinician. These individuals have a key role in assuring the quality of SBD services in the centre, within the context of the overall clinical governance framework.

Good information is essential to good management of health services. Performance measurement is one mechanism that enables Lead Clinicians and the NCCP to assess SBD services, to make comparisons between centres and identify areas for improvement as well as sharing good practice [3]. Key performance indicators (KPIs) are an important component of the NCCP monitoring programme. In isolation, KPIs cannot prove that a service is high quality, but properly interpreted, they serve as useful pointers.

To identify measures that would best assist in improving quality, the HIQA standards document was reviewed by an Expert Advisory Group. In conjunction with HIQA, ten key standards were identified and within the framework of these standards, 21 key performance indicators were defined to measure adherence to the standards. The

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<sup>1</sup> Beaumont, Mater, St. James’, St. Vincent’s University Hospital, Waterford Regional, Cork University, Limerick Regional, Galway University & its satellite Letterkenny.

KPIs are now reported to the NCCP and subsequently to HIQA on a monthly, quarterly or annual basis as appropriate. The KPIs measure adherence to standards on access to services, imaging and diagnostic services, multidisciplinary team working, time to treatment, surgery and pathology. The standards and KPIs are under constant review to ensure their appropriateness and suitability for an Irish context.

This is the first public reporting of the full suite of key performance indicators for SBD services in the eight designated cancer centres (inclusive of the satellite centre in Letterkenny). It also marks the first publication of such reporting on any symptomatic service within the Irish system.

## Activity in 2010

In 2010, 37,631 patients were referred to the symptomatic breast disease clinics in the eight designated cancer centres (Table 2). A total of 2,012 patients were diagnosed with primary breast cancer.

**Table 2. All attendances to symptomatic breast disease clinics and number of cancers subsequently diagnosed by cancer centre**

2010	Beaumont	Mater	St James's	SVUH	Waterford	Cork	Limerick	Galway /Letterkenny	Total
Total number of attendances triaged as urgent	687	2215	798	1608	1517	1865	1460	2403	12553
Total number of attendances triaged as non-urgent	3886	3025	3148	2912	1816	3236	1680	5375	25078
Total new attendances	<b>4573</b>	<b>5240</b>	<b>3946<sup>a</sup></b>	<b>4520</b>	<b>3333</b>	<b>5101</b>	<b>3140</b>	<b>7778</b>	<b>37631</b>
Number of patients newly diagnosed with cancer and discussed at MDM	229	215	275	245	179	336	200	333	2012

<sup>a</sup>St James's Hospital total excludes new family history referrals

## Standard 1 – Access

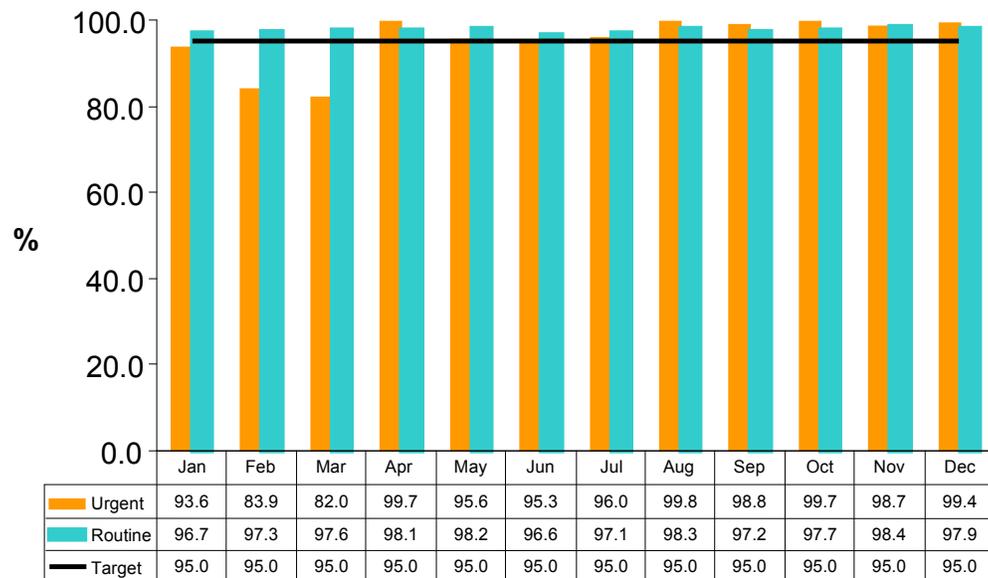
The first standard strives to ensure timely access to specialist opinion and states that “patients suspected of having breast cancer are seen within an appropriate timeframe” [4].

Ensuring good access to specialist opinion is important because such delays can be associated with marked patient anxiety, although delays in onset of treatment of up to 3 months has not been shown to affect survival [5-7].

Within this access standard, there are four KPIs. The first two KPIs focus on access to specialist opinion. The first KPI requires that over 95% of patients, who are triaged as urgent by the designated cancer centre, following receipt of the GP referral, are seen or offered an appointment to be seen, within 10 working days of receipt of the referral.

The second KPI requires that over 95% of patients triaged as non-urgent by the designated cancer centre, following receipt of the GP referral, are seen, or offered an appointment to be seen, within 12 weeks of receipt of the referral.

**Figure 2. Access to specialist opinion by month**



By the end of 2010, over 95% of patients who were triaged as being urgent by the designated cancer centre were seen within 2 weeks of receipt of the referral (Figure 2). For non-urgent patients – those considered routine - over 95% of patients were seen within the 12 week timeframe.

**Figure 3. Access to specialist opinion by cancer centre**

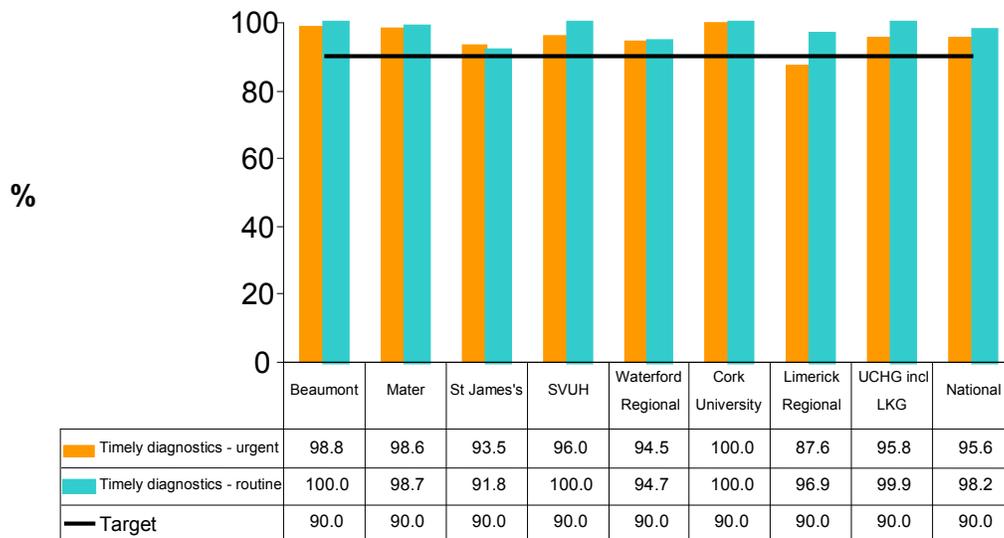


Looking at individual designated cancer centres, six out of the eight achieved the target for seeing urgent patients within a two week timeframe and seven out of eight designated cancer centres achieved the target for seeing routine patients within a 12 week timeframe (Figure 3). It should be noted that in relation to the two centres that did not achieve the target regarding urgent patients – the Mater Hospital and Cork University Hospital – they met the target by year end

By April 2010, the Mater Hospital had put on additional clinics and re organised their scheduling to meet the target. Consultants leave and cancelled clinics mid year in Cork University Hospital (CUH) led to an overall figure of 93.3%. Additional clinics were put in place and CUH met the target from August onwards. Waterford Regional Hospital was in the process of recruiting a consultant surgeon through much of 2010. Priority was give to urgent patients so some routine patients were not seen within the target timeframe. This has now been addressed with the appointment of a consultant surgeon in 2011 and this appointment is expected to impact significantly and assist the centre in meeting the target for routine cases.

An appointment for a specialist opinion is just the first step. In a high quality service, diagnostic processes must also be carried out in a timely manner. To address this, the third KPI regarding access requires that over 90% of new patients attending the cancer centre, who are considered urgent following the consultant surgeon’s assessment, will have a mammogram or ultrasound done on the first visit. The fourth and final KPI regarding the access standard requires that over 90% of new patients will have any breast imaging requests - mammogram or ultrasound - within 12 weeks of the consultant surgeon’s assessment at the clinic.

**Figure 4. Timely access to diagnostic imaging by cancer centre**



All centres achieved their target with respect to imaging within 12 weeks of the first specialist assessment at the clinic. For urgent imaging, while the centres were largely successful in achieving this target (Figure 4), one centre, Limerick Regional Hospital achieved 87.6% in relation to urgent cases. The centre identified an issue with consultant radiologist leave as contributing to the centre being unable to achieve the target.

## Standard 2 – Imaging

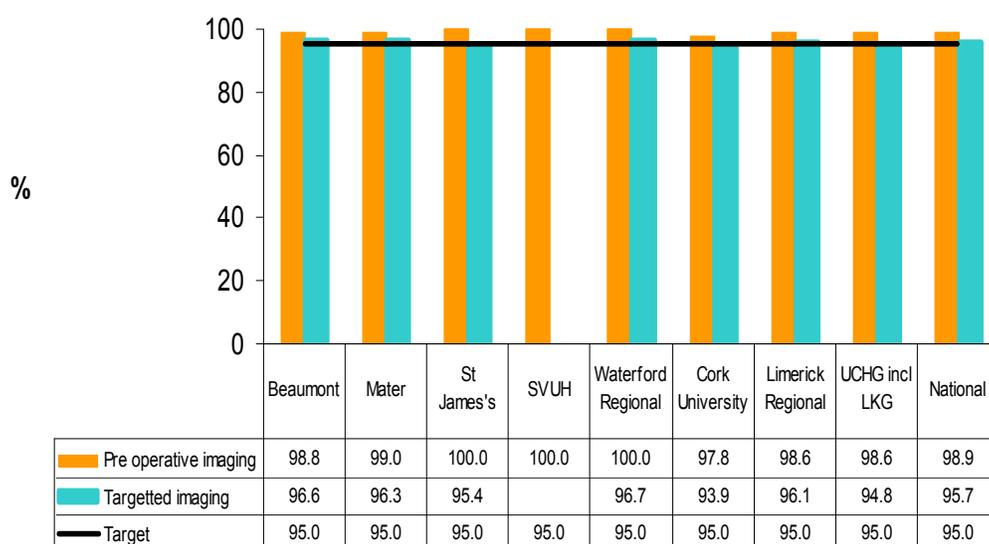
The second standard outlines that “patients should have access to appropriate imaging carried out by experienced professionals” [4].

To maximise accuracy of diagnosis, appropriate imaging needs to be undertaken and specialist radiology staff are essential for breast cancer diagnosis [5-7]. While timeliness of procedures is a significant consideration, from a quality perspective, it is equally important that patients have the *right* procedures carried out by the *right* person.

Four KPIs focus on this standard. A proper diagnostic work-up prior to surgery is key and the first KPI requires that more than 95% of patients with primary operable breast cancer will have both a mammogram and an ultrasound examination before their operation.

The second KPI requires that more than 95% of patients over the age of 35 with a clinically palpable focal abnormality should have both a mammogram and a targeted ultrasound examination.

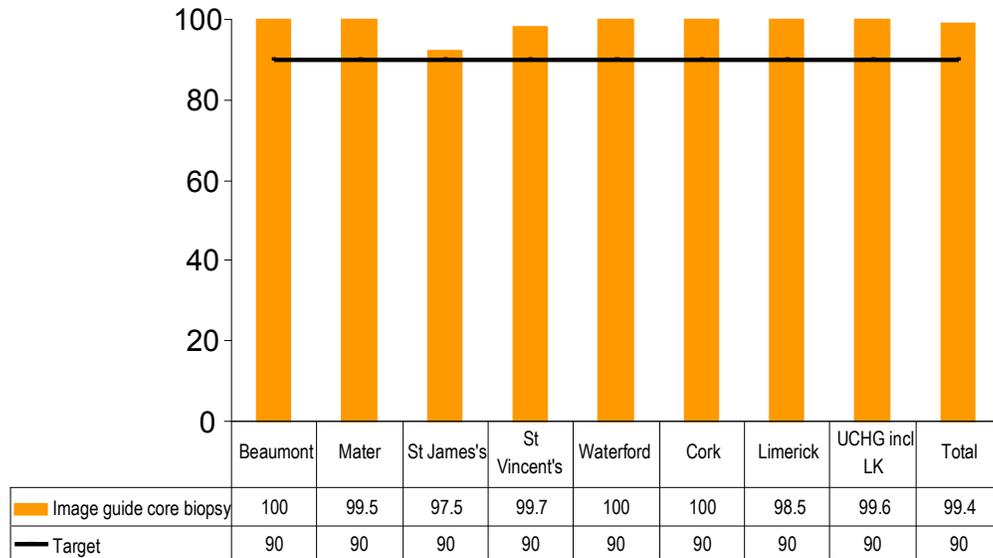
**Figure 5. Appropriate diagnostic imaging by cancer centre**



All centres achieved the target concerning pre-operative diagnostic work-up (Figure 5). Five of the centres achieved the target of over 95% for targeted imaging. In 2010, St. Vincent’s University Hospital was still developing its data production and management system and was not in a position to supply information for the KPI on targeted imaging. Cork University Hospital and University Hospital Galway incorporating Letterkenny satellite were within 1.1% of the target. The NCCP established that medical reasons were cited for patients not undergoing both examinations in most cases at both centres.

To maximise accurate diagnosis, it is important that where an imaging abnormality is identified and given a specific classification, follow up core biopsies of the abnormality are image guided. The third KPI requires that over 90% of patients who have an imaging abnormality that is classified in a specific way, have an image guided core biopsy of the tumour.

**Figure 6. Image guided core biopsies by cancer centre**



The target was achieved by all centres for this third KPI in 2010 (Figure 6).

The fourth KPI concerned with imaging requires that only high volume consultant radiologists are involved in the assessment of symptomatic breast disease. Towards this, the HIQA standard states that each consultant should report on a minimum of 1,000 mammograms per year. In 2010, 33/37 consultant radiologists reported more than 1,000 mammograms. This total included work carried out in a public hospital only. Some consultants have joint appointments in private hospitals.

### Standard 3 – Diagnosis

The third standard states that “all efforts are made to diagnose a patient non-operatively in a timely fashion” [4].

A non-operative diagnosis reduces the number of invasive procedures that the patient must undergo during treatment, so it is important that every effort is made to make the diagnosis without an operative procedure. This is not possible in all cases. Time from referral to diagnosis should be as short as possible to minimise anxiety to the patient [5-7].

There are two KPIs for this standard. The first requires that more than 90% of patients with primary breast cancer will be diagnosed without an operative procedure (open biopsy).

The second KPI requires that more than 90% of patients deemed urgent by the cancer centre and subsequently diagnosed with primary breast cancer are discussed by the multidisciplinary team meeting (MDM) within 10 working days of their first attendance at the clinic.

**Figure 7. Non-operative diagnosis and timely discussion at MDM by cancer centre**



All centres achieved the target regarding non-operative diagnosis (Figure 7).

Two designated centres did not achieve the target in the KPI focussed on timely MDM discussion. Limerick Regional Hospital experienced a backlog in pathology reporting following staffing issues. The radiology capacity issue also contributed to delays in discussion at MDM. A consultant breast pathologist has been appointed, which is expected to greatly assist in resolving the pathology issues.

University Hospital Galway incorporating Letterkenny satellite achieved 87%. The main contributor to the non-achievement of this target for the centre was the fact that a number of cases, having been initially triaged as urgent, subsequently proved to

have routine clinical findings. Some of these required additional procedures before a definitive diagnosis could be made.

## Standard 4 – Multidisciplinary Working

The fourth standard ensures multidisciplinary team working, specifying that “prior to performing any definitive treatment, the patient’s clinical, radiological and histological findings are discussed by the multidisciplinary team” [4]. This allows all relevant specialist staff to input into treatment planning [5-7].

Two KPIs measure this standard. The first KPI requires that over 95% of all patients who have breast investigations that generate a histopathology report are discussed at a multidisciplinary meeting. The second KPI requires that over 95% of all patients with a diagnosis of breast cancer are discussed at a multidisciplinary meeting.

**Figure 8. Multidisciplinary discussion at MDM by cancer centre**



All centres achieved the target in both KPIs (Figure 8).

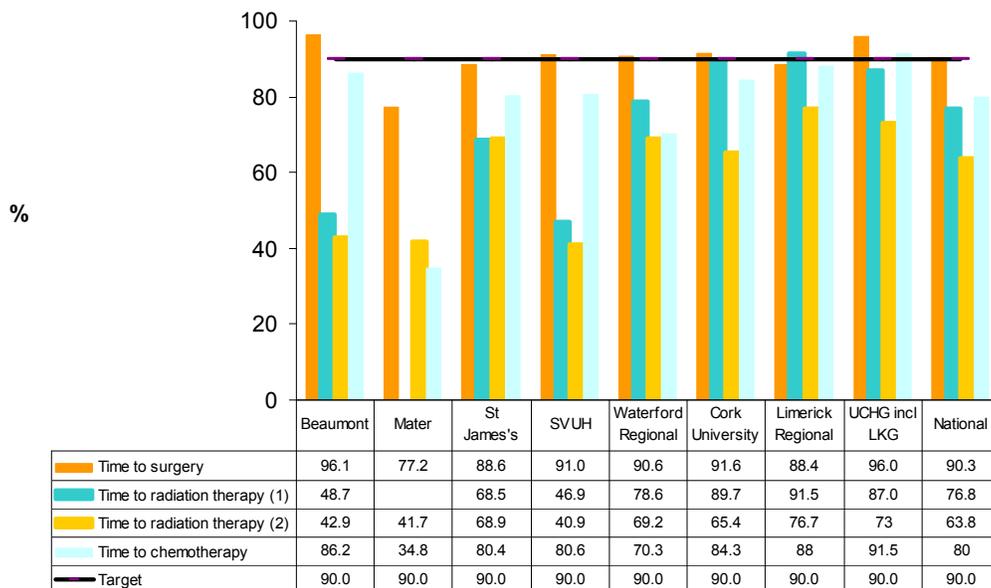
## Standard 5 – Time to Treatment

The fifth standard specifies that “patients are scheduled to receive their treatments within a safe timeframe” [4].

Recent evidence shows that certain time intervals are safe between treatments, allowing patients to prepare for and recover from treatments without impacting on survival. Scheduling treatments in a timely manner avoids the uncertainty and anxiety to patients associated with waiting for treatment [5-17].

There are four KPIs for this standard. The first KPI requires that if surgery is the first treatment, over 90% of patients will have their surgery carried out within 4 weeks of the date of the multidisciplinary meeting when the cancer was first discussed.

**Figure 9. Timely access to treatment by cancer centre**



Five of the designated cancer centres achieved this target (Figure 9). A number of reasons contributed to Limerick Regional Hospital achieving 88%. The centre is reviewing processes in radiology and access to day surgery to alleviate pressure in main theatre to enable them to improve their performance in this matter.

St James’s Hospital achieved 89%. The centre stated that a contributory factor that prevented them from reaching the target was that a number of patients were deemed to be medically unfit for surgery within the specified timeframe.

Having achieved 77%, the Mater Hospital reviewed their caseload and established that a number of patients requiring additional investigation contributed to delays in the diagnostic process. Many of these issues have now been resolved.

The second and third KPIs measure access to radiation therapy. The second KPI requires that over 90% of patients who are scheduled to receive radiation therapy following surgery and do not require chemotherapy, begin radiation therapy within 12 weeks of the final surgical procedure. The third KPI focuses on patients who need both chemotherapy and radiation therapy post-surgery. For these, the KPI requires that over 90% of patients will begin radiation therapy within 4 weeks of the last chemotherapy treatment.

These KPIs were established when there were significant access issues as a result of insufficient radiation therapy capacity nationally. In 2010, the NCCP was already at an advanced stage in investing in and establishing two new radiation oncology centres, building towards a national network of radiation oncology. As a result, St Luke's Radiation Oncology Network is now established across three sites in St James's Hospital, Beaumont Hospital and St Luke's Hospital Rathgar – leading to a 50% increase in capacity for patients in the east of the country.

Beyond Dublin, Limerick Regional Hospital achieved the target and Cork University Hospital achieved 90%. Both Cork University Hospital and University Hospital Galway are reviewing their processes to improve the time interval for patients.

For patients who had chemotherapy prior to their radiation therapy, over 10% had medical reasons for delaying therapy. The resolution of capacity issues in Dublin and review of processes in Cork and Galway should also help address the timeliness of radiation therapy after chemotherapy. Similar improvements in administrative procedures have been undertaken in Limerick Hospital.

The fourth KPI concerned with this standard requires that over 90% of patients who require chemotherapy post surgery will begin treatment within 8 weeks of the final surgical procedure. Only University Hospital Galway incorporating Letterkenny satellite achieved the target. Five centres were within 10% of attaining the target. A number of centres cited medical reasons, which resulted in patients not being fit for treatment at the scheduled date. The Mater Hospital had particular difficulty in achieving this target. The NCCP has established that staffing shortages in the Mater Hospital played an important role in the delays. These have been redressed with additional posts.

## Standard 6 – Accurate Localisation

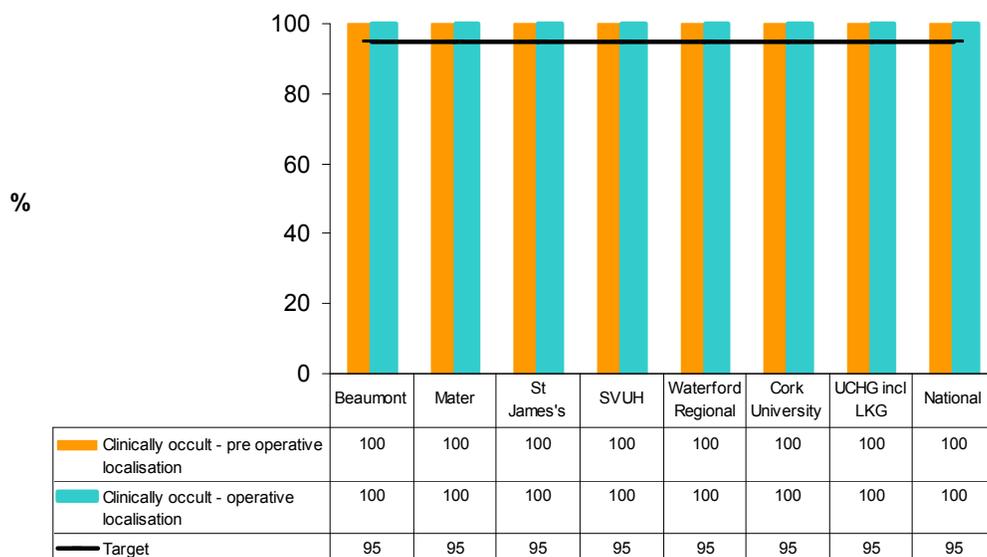
The sixth standard states that “breast tumours are localised as accurately as possible” [4].

The diagnosis of breast cancer is a multidisciplinary activity, requiring input from experienced professionals. Accurate localisation is required to ensure that targeted tissue material is available to pathologists [5, 6].

Some tumours cannot be felt on clinical examination – these are deemed to be clinically occult. Two parameters relate to the management of these tumours. The first KPI requires that over 95% of clinically occult tumours are defined using wire-localisation before surgery.

The second KPI requires that over 95% of those patients who have a wire-guided local excision will have specimen mammography.

**Figure 10. Clinically occult lesions - accurate localisation by cancer centre**



Seven centres achieved 100% for both KPIs (Figure 10). Limerick Regional Hospital did not supply data for either KPIs but systems have now been put in place however to enable the centre to capture data on patients with clinically occult lesions from January 2011.

## Surgery

Standards 7, 8 and 9 relate to surgery.

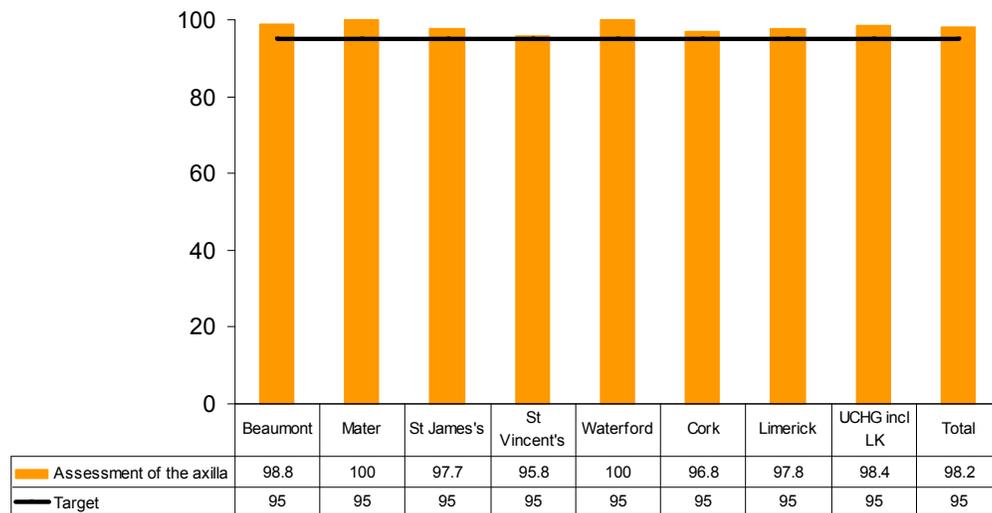
### Standard 7 – Axillary Staging

The seventh standard relates to axillary staging and states that “surgical staging of the axilla is performed in all newly diagnosed patients with a primary operable breast cancer” [4].

Lymph node status is a major prognostic indicator and a key determinant of appropriate adjuvant therapy.

The KPI requires that more than 95% of patients with a diagnosis of primary operable invasive breast cancer will have an ultrasound of the axillary nodes.

**Figure 11. Axillary ultrasound by cancer centre**



This was achieved in all eight designated cancer centres (Figure 11).

### Standard 8 – Surgical Specialisation

The evolution of the discipline of surgical oncology requires that consultant surgeons who treat patients with breast cancer have specific training and expertise in breast surgery and are familiar with the developments in other specialist disciplines involved in the management of breast cancer. Better outcomes have been demonstrated for patients who are treated by high volume or specialist doctors. Countries that have centralised their breast cancer services have seen improvements in survival that are independent of age, stage and social class [6, 18, 19].

The KPI that monitors this standard requires that consultants should assess and operate on a minimum of 50 new patients with breast cancer per year.

In 2010, 22/32 consultant surgeons assessed and operated on more than 50 new patients with breast cancer per year. This total included work undertaken in a public hospital only. Some consultants have joint appointments in private hospitals.

### **Standard 9 – Accuracy of Surgical Interventions**

Surgical treatment of breast cancer is such that patients may be suitable for a number of surgical interventions. Breast conserving surgery or mastectomy are two common options. Studies have shown no difference in survival between breast conserving surgery and mastectomy. It is not uncommon for those who undergo breast conserving surgery to need additional procedures to ensure the tumour has been completely removed. Patients prefer fewer and less invasive procedures. However, this preference must be balanced against the requirement for complete excision of the tumour [5-7, 20] .

International targets suggest that more than 95% of patients should have three or fewer therapeutic operations.

In 2010, all eight centres reported that 95% or more patients who underwent breast conserving surgery had three or fewer therapeutic operations.

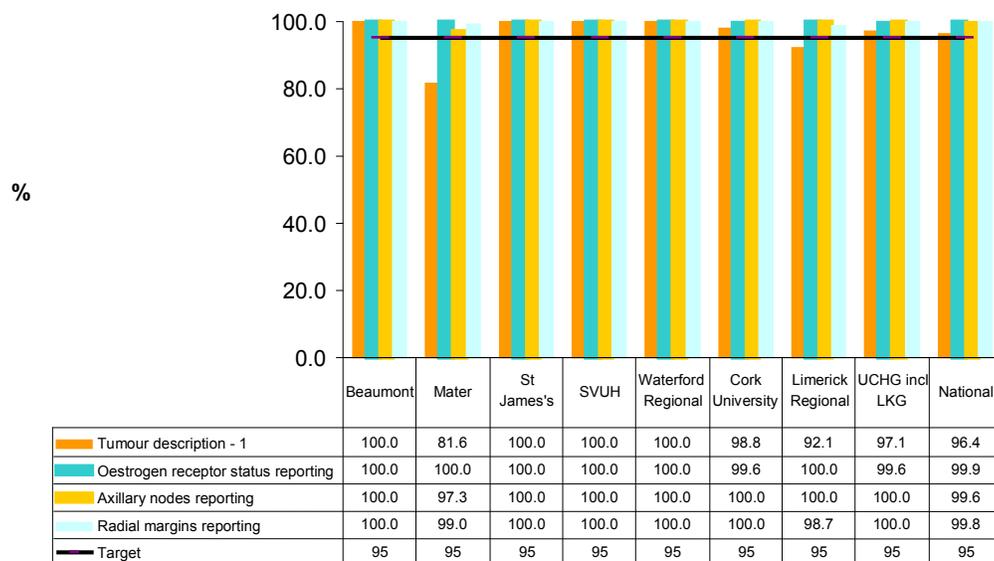
## Standard 10 – Pathology

The tenth standard states that “pathology reports should include a standard set of prognostic indicators that will be available to the multidisciplinary team in a timely fashion” [2].

Comprehensive, accurate, timely information on the pathology of the tumour is essential for treatment planning [5-7, 20].

There are four KPIs for this standard. The first three examine the completeness of recording of the pathologists’ findings, looking at different elements that should be contained in the report. The first KPI measures whether more than 95% of pathology reports include a recording of the tumour type, grade, size, lymphovascular invasion, and margin status for the highest grade tumour. Lymph node status is also required to be reported when lymph nodes are sampled

**Figure 12. Completeness of pathology reporting by cancer centre**



In 2010, six out of eight designated cancer centres achieved the target in all of these parameters, with the majority achieving 100% (Figure 12). Limerick Regional Hospital was outside this target by just 2.9% and the Mater Hospital by 13.4%. As previously outlined, Limerick Regional Hospital is in the process of addressing some pathology issues which will also resolve the issue here.

The Mater Hospital is currently carrying out a more detailed audit of report completeness to establish the reasons behind their non adherence to the standard.

The third KPI requires that more than 90% of patients' pathology reports include the HER-2 receptor status for the highest grade tumour. The target is achieved in seven of the eight designated cancer centres. Limerick Regional Hospital achieved 84% and as a consequence, the local policy on testing has been revised.

The fourth KPI focuses on the timeliness of the pathology report and requires that in more than 95% of cases, the histopathology report containing the prognostic data will be available to the treating consultant within 10 working days. Five designated cancer centres achieved this target. Two centres - University Hospital Galway/Letterkenny and Waterford Regional Hospital - were within 5% of this and Limerick Hospital achieved 81.2%. Issues already mentioned in relation to Limerick Regional Hospital contributed to the target not being achieved and processes are being reviewed in all three centres to improve service delivery and adherence to the standard.

## **Conclusions**

Overall, targets are largely being met by the individual designated cancer centres. Where there are particular problems with any one target in an individual centre, every effort is being made to redress them and early figures for 2011 indicate improvement. As stated at the beginning, the development of standards and KPIs for Breast Service Performance is under constant review to ensure appropriateness and applicability to Ireland.

Although some centres are not meeting the target for certain KPIs, this non-achievement of a target often hides the fact that the medical interventions, assessment etc were in fact delivered only just outside the target timeframe. By the same token, many of the care interventions were delivered in much less time than the defined timeframe.

Targets are useful in directing the health service in delivering a better service to patients and assist in tracking where the patient care pathway is strong or where it needs particular attention. Every effort is made to achieve and exceed targets but targets in themselves are not the whole picture. The patient care pathway and experience is different for every individual and achieving or missing a target does not of necessity suggest a patient has received a higher or poorer quality of health care. A multiplicity of factors is always at play, not least patient choice, and as healthcare providers and recipients, it is vital, whilst striving for the highest standards, not to see targets as ends in themselves.

The final finding of HIQA's National Quality Review of Symptomatic Breast Disease Services was that the essential elements were in place in each of the eight designated cancer centres to provide a high quality service. The Key Performance Indicators Report offers additional evidence of high quality service delivery as well as providing the designated cancer centres and the NCCP with some useful markers for further improvement.

## References

1. NCRI, *Cancer in Ireland 2011: Annual report of the National Cancer Registry*. 2011, National Cancer Registry.
2. HIQA, *Report of the National Quality Review of Symptomatic Breast Disease Services in Ireland*. 2010.
3. HIQA, *Guidance on Developing Key Performance Indicators and Minimum Data Sets to Monitor Healthcare Quality*. 2010.
4. NCCP, *Revised Performance Indicators*. 2009.
5. Association of Breast Surgery at, B., *Surgical guidelines for the management of breast cancer*. European Journal of Surgical Oncology (EJSO), 2009. **35**(Supplement 1): p. S1.
6. HIQA, *National Quality Assurance Standards for Symptomatic Breast Services*. 2006.
7. Scotland, N.Q.I., *Clinical standards - management of breast cancer services*. 2008.
8. Chen, Z., et al., *The relationship between waiting time for radiotherapy and clinical outcomes: A systematic review of the literature*. Radiotherapy and Oncology, 2008. **87**(1): p. 3.
9. Cold, S., et al., *Does timing of adjuvant chemotherapy influence the prognosis after early breast cancer? Results of the Danish Breast Cancer Cooperative Group (DBCG)*. Br J Cancer, 2005. **93**(6): p. 627-32.
10. Hebert-Croteau, N., et al., *Delay in adjuvant radiation treatment and outcomes of breast cancer--a review*. Breast Cancer Res Treat, 2002. **74**(1): p. 77-94.
11. Hershman, D.L., et al., *Delay of adjuvant chemotherapy initiation following breast cancer surgery among elderly women*. Breast Cancer Res Treat, 2006. **99**(3): p. 313-21.
12. Hershman, D.L., et al., *Delay in initiating adjuvant radiotherapy following breast conservation surgery and its impact on survival*. International Journal of Radiation Oncology\*Biography\*Physics, 2006. **65**(5): p. 1353.
13. Huang, J., et al., *Does delay in starting treatment affect the outcomes of radiotherapy? A systematic review*. J Clin Oncol, 2003. **21**(3): p. 555-63.
14. Livi, L., et al., *Radiotherapy Timing in 4,820 Patients With Breast Cancer: University of Florence Experience*. International Journal of Radiation Oncology\*Biography\*Physics, 2009. **73**(2): p. 365.
15. Lohrisch, C., et al., *Impact on Survival of Time From Definitive Surgery to Initiation of Adjuvant Chemotherapy for Early-Stage Breast Cancer*. J Clin Oncol, 2006. **24**(30): p. 4888-4894.
16. Olivotto, I.A., et al., *Intervals longer than 20 weeks from breast-conserving surgery to radiation therapy are associated with inferior outcome for women with early-stage breast cancer who are not receiving chemotherapy*. J Clin Oncol, 2009. **27**(1): p. 16-23.
17. Shannon, C., S. Ashley, and I.E. Smith, *Does timing of adjuvant chemotherapy for early breast cancer influence survival?* J Clin Oncol, 2003. **21**(20): p. 3792-7.
18. Morris, E., et al., *The impact of the Calman-Hine report on the processes and outcomes of care for Yorkshire's breast cancer patients*. Ann Oncol, 2008. **19**(2): p. 284-91.
19. Stefoski Mikeljevic, J., et al., *Surgeon workload and survival from breast cancer*. Br J Cancer, 2003. **89**(3): p. 487-91.

20. NHSBSP, *National Co-ordinating Group for Surgeons Working in Breast Cancer Screening: Quality Assurance Guidelines For Surgeons in Breast Cancer Screening*. NHSBSP Publications no.20, 2003.