

## CORE SET OF INDICATORS

**Key:** BCS – breast conserving surgery; breast CNS – breast cancer nurse specialist; CaNISC - Cancer Network Information System Cymru; COSD - Cancer Outcomes and Services Dataset; DCIS – ductal carcinoma in situ; ER - oestrogen receptor; HER2 - Human epidermal growth factor receptor 2; HES – Hospital Episode Statistics; LOS – Length of stay; MRI – magnetic resonance imaging; O – outcome indicator; ONS – Office for National Statistics; P – process indicator; PET – Primary endocrine therapy; RTDS - National Radiotherapy Dataset; SACT - Systemic Anti-Cancer Therapy Dataset; SLNB - Sentinel lymph node biopsy.

### Core set of indicators (n=13)

Pathway	Type	#	Indicator	Denominator	Numerator	Database(s)	Standard/ guideline
Diagnosis and staging	P	1	Triple diagnostic assessment in a single visit <sup>1,2</sup>	Patients with suspected breast cancer who are referred to specialist services	Patients who receive triple diagnostic assessment in a single visit	COSD, CaNISC	NICE CG80, 2009 <sup>3</sup> NICE QS12, 2011 <sup>1</sup>
Diagnosis and staging	P	2	Referral route to diagnosis <sup>2</sup>	Patients with DCIS or invasive breast cancer	Patients diagnosed by emergency presentation or referral from other specialities versus screening or GP referral (on or off the two week wait)	COSD, HES	NICE CG80, 2009 <sup>3</sup> NICE QS12, 2011 <sup>1</sup>
Diagnosis and staging	P	3	Recorded hormone status <sup>1,2</sup>	Patients with invasive breast cancer	Patients with hormone status recorded: 1. ER status 2. HER2 status	COSD	NICE CG80, 2009 <sup>3</sup>
Diagnosis and staging	P	4	Metastatic disease at initial presentation	Patients with invasive breast cancer	Patients with metastatic disease at initial presentation of a new diagnosis of invasive breast cancer.	COSD	NICE CG81, 2009 <sup>4</sup>
Diagnosis and staging	P	5	Seen by a breast CNS/named key worker <sup>3</sup>	Patients diagnosed with DCIS, primary or recurrent invasive breast cancer with or without metastatic disease	Patients seen by a breast CNS/named key worker: 1. All patients (including those with metastatic disease at initial presentation) 2. Patients with previous diagnosis of breast cancer (recurrent/metastatic disease)	COSD	NICE CG80, 2009 <sup>3</sup> NICE CG81, 2009 <sup>4</sup>

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Pathway	Type	#	Indicator	Denominator	Numerator	Database(s)	Standard/ guideline
Treatment	P	6	Time to first treatment	Patients with DCIS or invasive breast cancer	Patients who received surgery or non-surgical treatment	COSD, SACT and RTDS.	CWT, 2007 <sup>5, 6</sup>
Surgery	P	7	Surgery for DCIS or early stage invasive breast cancer <sup>3, 7</sup>	Patients with DCIS or early stage invasive breast cancer	Patients who receive surgery Two indicators based on denominator: 1. DCIS 2. Early stage invasive breast cancer	COSD	NICE CG80, 2009 <sup>3</sup> SIOG/EUSOMA, 2012 <sup>8</sup>
Surgery	P	8	Mastectomy for early invasive breast cancer <sup>3, 7</sup>	Patients with invasive breast cancer	Patients who receive mastectomy: 1. Proportion of mastectomies by age group 2. Proportion of mastectomies for given total tumour size <15mm	COSD	NICE CG80, 2009 <sup>3</sup> SIOG/EUSOMA, 2012 <sup>8</sup>
Diagnosis and staging	P	9	Any axillary nodal surgery <sup>2</sup>	Patients with invasive breast cancer	Patients who received SLNB, axillary node sampling or dissection; with recorded lymph node status	COSD	NICE QS12, 2011 <sup>1</sup> NICE CG80, 2009 <sup>3</sup> NICE DG8, 2013 <sup>9</sup> SIGN 134, 2013 <sup>10</sup> SIOG/EUSOMA, 2012 <sup>8</sup>
Chemotherapy	P	10	Chemotherapy for invasive breast cancer <sup>3</sup>	Patients with invasive breast cancer	Patients who receive chemotherapy: 1. Proportion who receive neoadjuvant chemotherapy 2. Proportion who receive adjuvant chemotherapy	COSD, SACT	NICE CG80, 2009 <sup>3</sup> SIGN 134, 2013 <sup>10</sup> NICE CG81, 2009 <sup>4</sup> SIOG/EUSOMA, 2012 <sup>8</sup>

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Pathway	Type	#	Indicator	Denominator	Numerator	Database(s)	Standard/ guideline
Radiotherapy	P	11	Radiotherapy after breast cancer surgery <sup>3, 10, 11</sup>	Patients with DCIS or early stage invasive breast cancer	Patients who receive radiotherapy after BCS or mastectomy: 1. Proportion with DCIS 2. Proportion with early stage invasive breast cancer  Dependent on data quality, could further refine by 1. Radiotherapy initiated, 2. Radiotherapy completed.	COSD, RTDS	NICE CG80, 2009 <sup>3</sup> SIGN 134, 2013 <sup>10</sup> SIOG/EUSOMA, 2012 <sup>8</sup>
Acute care	P	12	Length of hospital stay after surgery	Patients with DCIS or invasive breast cancer who receive surgery	Length of hospital stay from date of surgery to date of discharge from hospital: 1. Proportion by type of surgery. 2. Proportion who undergo surgery as day case surgery.	HES, COSD.	NICE QP case study, 2012 <sup>12</sup> SCT, 2016 <sup>13</sup>
Outcomes	O	13	Mortality at one, three and five years <sup>2</sup>	Patients with DCIS or invasive breast cancer	Patients who die within: 1. One year 2. Three years 3. Five years	COSD, ONS	NHS Outcomes Framework 2015–16 <sup>14</sup> Public Health Outcomes Framework 2013-2016 <sup>15</sup>

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### References

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