

# Scottish Cancer Taskforce National Cancer Quality Steering Group

# **Cervical Cancer Clinical Quality Performance Indicators**

**Published: October 2014** 

**Updated:** June 2015 (v1.1)

**August 2016 (v2.0)** 

**December 2018 (v3.0)** 

**April 2022 (v4.0)** 

Published by:

Healthcare Improvement Scotland

#### **Contents Update Record:**

#### April 2022 (v4.0)

This document was updated following formal review (2nd cycle) of the Cervical Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 6 of the Cervical Cancer QPI data.

#### The following QPI has been updated:

• QPI 4 – Radical Hysterectomy

#### The following QPIs have been archived:

- QPI 2 Positron Emission Tomography / Computed Tomography (PET/CT)
- QPI 2 Multidisciplinary Team Meeting (MDT)

As a result of the changes above, the contents page and page numbering differ from earlier versions of this document. Sections 1 - 10 and the appendices have also been updated.

Please note that this version of the Cervical Cancer QPI Document applies to cases diagnosed from 1st October 2021 onwards.

#### **Previous Updates**

#### **December 2018 (v3.0)**

This document was updated following formal review of the Cervical Cancer Quality Performance Indicators (QPIs) which took place following analysis of year 3 of the Cervical Cancer QPI data.

#### The following QPIs have been updated:

- QPI 1 Radiological Staging
- QPI 2 Positron Emission Tomography/Computed Tomography (PET/CT)
- QPI 3 Multi-disciplinary Team Meeting (MDT)

Please note the Clinical Trial and Research Study Access has now been added into each tumour specific QPI document (See QPI 8 – Clinical Trial and Research Study Access).

As a result of the changes above, the contents page and page numbering differ from earlier version of this document. Sections 1 – 9 and the appendices have also been updated.

Please note that this version of the Cervical Cancer QPI Document applies to cases diagnosed from 1st October 2017. Where amended or new QPIs require new data items for measurement, this will apply for patients diagnosed from 1st October 2018.

#### August 2016 (v2.0)

This document was updated following baseline review of the Cervical Cancer QPIs which took place following analysis of year 1 of the Cervical Cancer data. As a result, the following QPIs have been updated:

- QPI 1 Radiological Staging
- QPI 3 Multidisciplinary Team Meeting (MDT)

- QPI 4 Radical Hysterectomy
- QPI 5 Surgical Margins

Please note that this version of the Cervical Cancer QPI document applies to cases diagnosed from 1st October 2015.

#### June 2015 (v1.1)

This document has been updated to ensure accurate measurement of QPI 1: Radiological Staging, as agreed by the QPI Development Group during the QPI development process.

### **Contents Page**

1.	National Cancer Quality Programme	5
1.1	Quality Assurance and Continuous Quality Improvement	5
2.	Quality Performance Indicator Development Process	5
3.	QPI Formal Review Process	6
4.	Format of the Quality Performance Indicators	6
5.	Supporting Documentation	7
6.	Quality Performance Indicators for Cervical Cancer	8
QP	l 1 - Radiological Staging	8
QP	I 4 - Radical Hysterectomy	9
QP	l 5 - Surgical Margins	10
QP	l 6 - 56 Day Treatment Time for Radical Radiotherapy	11
QP	I 7 - Chemoradiation	12
QP	I 8 - Clinical Trial and Research Study Access	13
7.	Survival	14
8.	Areas for Future Consideration	14
9.	Governance and Scrutiny	14
9.1	National	14
9.2	Regional – Regional Cancer Networks	15
9.3	Local – NHS Boards	15
10.	References	16
11.	Appendices	18
Ap	pendix 1: QPI Development Process	18
Ap <sub> </sub> (20	pendix 2: Cervical and Endometrial Cancer QPI Development Group Membe 14)	rship 20
Ap <sub> </sub> (20	pendix 3: Cervical and Endometrial Cancer Formal Review Group Members 18)	nip 22
	pendix 4: Cervical and Endometrial Cancer Formal Review Group Members 21)	nip 23
	pendix 5: 3 Yearly National Governance Process & Improvement Frameworl ncer Care	for 24
	pendix 6: Regional Annual Governance Process and Improvement Framewo Cancer Care	ork 25
Apı	pendix 7: Glossary of Terms	26

#### 1. National Cancer Quality Programme

Better Cancer: Ambition and Action (2016)¹ details a commitment to delivering the national cancer quality programme across NHSScotland, with a recognised need for national cancer QPIs to support a culture of continuous quality improvement. Addressing variation in the quality of cancer services is pivotal to delivering improvements in quality of care. This is best achieved if there is consensus and clear indicators for what good cancer care looks like.

Small sets of cancer specific outcome focussed, evidence based indicators are in place for 19 different tumour types. These QPIs ensure that activity is focused on those areas that are most important in terms of improving survival and individual care experience whilst reducing variation and supporting the most effective and efficient delivery of care for people with cancer. QPIs are kept under regular review and are responsive to changes in clinical practice and emerging evidence.

A programme to review and update the QPIs in line with evolving evidence is in place as well as a robust mechanism by which additional QPIs will be developed over the coming years.

#### 1.1 Quality Assurance and Continuous Quality Improvement

The ultimate aim of the programme is to develop a framework, and foster a culture of, continuous quality improvement, whereby real time data is reviewed regularly at an individual Multi Disciplinary Team (MDT)/Unit level and findings actioned to deliver continual improvements in the quality of cancer care. This is underpinned and supported by a programme of regional and national comparative reporting and review.

NHS Boards are required to report against QPIs as part of a mandatory, publicly reported, programme at a national level. A rolling programme of reporting is in place, with approximately three national tumour specific summary reports published annually. These reports highlight the publication of the QPIs in the Cancer QPI Dashboard which includes comparative reporting of performance against QPIs at MDT/Unit level across NHSScotland, trend analysis and survival. This approach helps to overcome existing issues relating to the reporting of small volumes in any one year.

In the intervening years tumour specific QPIs are monitored on an annual basis through established Regional Cancer Network and local governance processes, with analysed data submitted Public Health Scotland (PHS) (previously ISD Scotland) for inclusion in the Cancer QPI Dashboard and subsequent national summary reports. This approach ensures that timely action is taken in response to any issues that may be identified through comparative reporting and systematic review.

#### 2. Quality Performance Indicator Development Process

The QPI development process was designed to ensure that indicators are developed in an open, transparent and timely way. The development process can be found in appendix 1.

The Cervical and Endometrial Cancer QPI Development Group was convened in September 2013, chaired by Mr Colin McKay (Consultant Surgeon, NHS Greater Glasgow and Clyde). Membership of this group included clinical representatives drawn from the three regional cancer networks, Healthcare Improvement Scotland, ISD and patient/carer representatives. Membership of the development group can be found in appendix 2.

#### 3. QPI Formal Review Process

As part of the National Cancer Quality Programme a systematic national review process has been developed, whereby all tumour specific QPIs published are subject to formal review following 3 years analysis of comparative QPI data.

Formal review of the Cervical Cancer QPIs was undertaken for the first time in June 2018. A Formal Review Group was convened, chaired by Mr James Powell, Consultant Hepatopancreatobiliary (HPB) Cancer Surgeon. Membership of this group included Clinical Leads from the three Regional Cancer Networks and can be found in appendix 3.

The 2nd cycle of formal review commenced in July 2021 following reporting of 6 years of QPI data. This cycle of review is more selective and focussed on ensuring the ongoing clinical relevance of the QPIs. A Formal Review Group was convened, with Ioanna Nixon, Consultant Clinical Oncologist, West of Scotland Cancer Network appointed as Clinical Advisor/Chair to the group. Membership of this group can be found in appendix 4.

The formal review process is clinically driven with proposals for change sought from specialty specific representatives in each of the Regional Cancer Networks. Formal review meetings to further discuss proposals are arranged where deemed necessary. The review builds on existing evidence using expert clinical opinion to identify where new evidence is available, and a full public engagement exercise will take place where significant revisions have been made or new QPIs developed.

During formal review QPIs may be archived and replaced with new QPIs. Triggers for doing so include significant change to clinical practice, targets being consistently met by all Boards, and publication of new evidence. Where QPIs have been archived, for those indicators which remain clinically relevant, data will continue to be collected to allow local / regional analysis of performance as required.

Any new QPIs have been developed in line with the following criteria:

- **Overall importance** does the indicator address an area of clinical importance that would significantly impact on the quality and outcome of care delivered?
- Evidence based is the indicator based on high quality clinical evidence?
- Measurability is the indicator measurable i.e. are there explicit requirements for data measurement and are the required data items accessible and available for collection?

#### 4. Format of the Quality Performance Indicators

QPIs are designed to be clear and measurable, based on sound clinical evidence whilst also taking into account other recognised standards and guidelines.

- Each QPI has a short title which will be utilised in reports as well as a fuller description which explains exactly what the indicator is measuring.
- This is followed by a brief overview of the **evidence base and rationale** which explains why the development of this indicator was important.
- The measurability **specifications** are then detailed; these highlight how the indicator will actually be measured in practice to allow for comparison across NHSScotland.
- Finally a **target** is indicated, this dictates the level which each unit should be aiming to achieve against each indicator.

In order to ensure that the chosen target levels are the most appropriate and drive continuous quality improvement as intended they are kept under review and revised as necessary, if further evidence or data becomes available.

Rather than utilising multiple exclusions, a tolerance level has been built into the QPIs. It is very difficult to accurately measure patient choice, co-morbidities and patient fitness therefore target levels have been set to account for these factors. Further detail is noted within QPIs where there are other factors which influenced the target level.

Where 'less than; (<) target levels have been set the rationale has been detailed within the relevant QPI. All other target levels should be interpreted as 'greater than' (>) levels.

#### 5. Supporting Documentation

A national minimum core dataset and a measurability specification document have been developed in parallel with the indicators to support the monitoring and reporting of Cervical Cancer QPIs. The updated document will be implemented for patients diagnosed with Cervical Cancer on, or after, 1st October 2021.

## 6. Quality Performance Indicators for Cervical Cancer

## QPI 1 - Radiological Staging

QPI Title:  Description:	Patients with cervical cancer should have their stage of disease assessed by magnetic resonance imaging (MRI) prior to definitive treatment.  Proportion of patients with cervical cancer who have an MRI of the		
		prior to definitive treatment.	
Rationale and Evidence:	It is necessary to fully image the pelvis prior to definitive treatment in order to establish the extent of disease and minimise unnecessary or inappropriate treatment.		
Specifications:	Numerator: Number of patients with cervical cancer having MRI of the pelvis carried out prior to definitive treatment.		
	<b>Denominator:</b> All patients with cervical cancer.		
	• Patients with histopathological FIGO <sup>a</sup> stage IA1 disease.		
	Patients unable to undergo MRI due to contraindications.		
	<ul> <li>Patients with histopathological FIGO stage IVB disease.</li> </ul>		
	Patients who decline MRI investigation.		
Target:	95%		
	The tolerance within this target accounts for situations where patients require urgent treatment before imaging has been performed, or where cervical cancer is an incidental finding at surgery.		

<sup>&</sup>lt;sup>a</sup> FIGO – International Federation of Gynecology and Obstetrics

## **QPI 4 - Radical Hysterectomy**

QPI Title:	Patients with stage IA2–IB2 cervical cancer should undergo radical hysterectomy.		
Description:	Proportion of patients with stage IA2-IB2 cervical cancer (as defined by radiology and/or histopathology) who undergo radical hysterectomy.		
Rationale and Evidence:	Radical surgery is recommended for FIGO stage IA2-IB2 disease where there are no contraindications to surgery. The standard management for patients with FIGO stages IA2, IB1 and IB2 (FIGO 2018) cervical cancer is radical hysterectomy and bilateral salpingectomy (+/- bilateral oophorectomy with bilateral pelvic lymphadenectomy) <sup>2</sup> .  In young women quality of life is less impaired after radical hysterectomy than following chemo-radiation therapy <sup>3</sup> .		
Specifications:	Numerator: Number of patients with FIGO stage IA2-IB2 cervical cancer who undergo radical hysterectomy.		
	<b>Denominator:</b> All patients with FIGO stage IA2-IB2 cervical cancer.		
	Exclusions:	<ul> <li>Patients who decline surgery.</li> <li>Patients who undergo fertility conserving treatment.</li> <li>Patients having neo adjuvant chemotherapy.</li> <li>Patient enrolled into surgical trials.</li> </ul>	
Target:	85%		
	The tolerance within this target allows for situations where surgery is not appropriate, for example where patients have significant comorbidities. It also accounts for those patients where cervical cancer has been an incidental finding at surgery.		

## **QPI 5 - Surgical Margins**

QPI Title:	Patients with surgically treated cervical cancer should have clear resection margins.	
Description:		nts with cervical cancer who have surgical margins owing hysterectomy <sup>b</sup> .
Rationale and Evidence:	The quality of radical surgery for cervical cancer has an important influence on local control of the tumour and ultimately survival. Therefore, it is important to optimise and ensure the quality of surgical care for cervical cancer patients. Positive surgical margins increase the risk of reoccurrence, necessitating adjuvant treatment <sup>4,5,6</sup> .	
Specifications:	Numerator: Number of patients with cervical cancer who undergo surgery where surgical margins are cl of tumour.	
	Denominator:	All patients with cervical cancer who undergo surgery.
	Exclusions:  • No exclusions.	
Target:	95%  The tolerance within this target allows for cases in which it is not clinically possible to achieve a clear surgical margin despite full radiological staging.	

b As determined by pathology

## **QPI 6 - 56 Day Treatment Time for Radical Radiotherapy**

QPI Title:	Treatment time for patients with cervical cancer undergoing radical radiotherapy should be no more than 56 days.		
Description:	Proportion of patients with cervical cancer undergoing radical radiotherapy whose overall treatment time, from the start to the end of treatment, is not more than 56 days.		
Rationale and Evidence:	Prolongation of overall treatment has been shown to result in a decrease on local control rate <sup>7</sup> .  Overall treatment time for locally advanced cervical cancer should be as short as possible. Radiotherapy for squamous carcinoma should be completed within 56 days <sup>8</sup> .  Measures to encourage compliance, to avoid gaps in treatment and also departmental arrangements to adjust where planned treatment schedule coincides with bank holidays or planned machine down time, need to be in place <sup>8</sup> .		
Specifications:	Numerator:  Number of patients with cervical cancer undergoing radical radiotherapy (external beam or brachytherapy) whose overall treatment time, from start to the end of treatment, is not more than 56 days.		
	<b>Denominator:</b> All patients with cervical cancer undergoing radical radiotherapy (external beam or brachytherapy).		
	Exclusions:  • No exclusions.		
Target:	90%  The tolerance within this target allows for patients who default on their treatment.		

### **QPI 7 - Chemoradiation**

QPI Title:	Patients with cervical cancer undergoing radical radiotherapy should receive concurrent platinum-based chemotherapy.		
Description:		nts with cervical cancer undergoing radical receive concurrent chemotherapy.	
Rationale and Evidence:	Addition of chemotherapy to radiotherapy has been shown in several randomised trials and in a meta-analysis to improve overall survival <sup>3,4,9,10</sup> .  Any patient with cervical cancer considered suitable for radical radiotherapy treatment should have concurrent chemoradiotherapy with a platinum based chemotherapy, if fit enough <sup>3</sup> .  Concurrent chemoradiation is the primary treatment of choice for stages IB2 to IVA disease based on the results of 5 randomised clinical trials <sup>4</sup> .		
Specifications:	Numerator: Number of patients with cervical cancer undergoing radical radiotherapy who receive concurrent chemotherapy.		
	<b>Denominator:</b> All patients with cervical cancer who undergo radical radiotherapy.		
	Exclusions:   • No exclusions.		
Target:	The tolerance within this target allows for patients for whom chemotherapy is contraindicated, for example where patients have significant co-morbidities or fitness levels which preclude chemotherapy.		

#### QPI 8 - Clinical Trial and Research Study Access

QPI Title:	All patients should be considered for participation in available clinical trials / research studies, wherever eligible.		
Description:	Proportion of patients diagnosed with cervical cancer who are consented <sup>c</sup> for a clinical trial / research study.		
Rationale and Evidence:	Clinical trials are necessary to demonstrate the efficacy of new therapies and other interventions <sup>11</sup> . Evidence suggests improved patient outcomes when hospitals are actively recruiting patients into clinical trials <sup>12</sup> .		
	Clinicians are therefore encouraged to enter patients into well-designed trials and to collect longer-term follow-up data.		
	High accrual activity into clinical trials is used as a goal of an exemplary clinical research site.		
	The measurement of this QPI focuses on those patients who have consented in order to reflect the intent to join a clinical trial and demonstrate the commitment to recruit patients. Often patients can be prevented from enrolling within a trial due to stratification of studies and precise inclusion criteria identified during the screening process.		
Specifications:	Numerator: Number of patients diagnosed with cervical cancer consented for a clinical trial / research study.		
	<b>Denominator:</b> All patients diagnosed with cervical cancer.		
	Exclusions:  • No exclusions.		
Target:	15%		

#### Please note:

The Clinical Trials and Research Study Access QPI is measured utilising SCRN data and ISD incidence data, as is the methodology currently utilised by the Chief Scientist Office (CSO) and NCRI. The principal benefit of this approach is that this data is already collected utilising a robust mechanism.

Utilising SCRN data allows for comparison with CSO published data and ensures capture of all eligible clinical trials and research studies, not solely first line treatment trials, as contained in the clinical audit data. Given that a significant proportion of clinical trials and research studies are for relapsed disease this is felt to be particularly important in driving quality improvement. This methodology utilises incidence as a proxy for all patients with cancer. This may slightly over, or underestimate, performance levels, however this is an established approach currently utilised by NHSScotland.

For further details of definitions, inclusion criteria and methodology used, please see the full Clinical Trials and Research Study Access QPI. This can be found at:

Healthcare Improvement Scotland - Cancer Quality Performance Indicators

<sup>&</sup>lt;sup>c</sup> Consented is defined as patients who have given consent to participate in a clinical trial / research study subject to study specific screening for eligibility.

#### 7. Survival

Improving survival forms an integral part of the national cancer quality improvement programme. Cervical cancer survival analysis will be reported and analysed on a 3 yearly basis by Public Health Scotland (PHS). The specific issues which will be addressed will be identified by an expert group ahead of any analysis being undertaken, as per the agreed national cancer quality governance and improvement framework.

To ensure consistent application of survival analysis, it has been agreed that a single analyst on behalf of all three regional cancer networks undertakes this work. Survival analysis will be scheduled as per the national survival analysis and reporting timetable, agreed with the National Cancer Quality Steering Group and Scottish Cancer Taskforce. This reflects the requirement for record linkage and the more technical requirements of survival analyses which would make it difficult for individual Boards to undertake routinely and in a nationally consistent manner.

#### 8. Areas for Future Consideration

The Cervical and Endometrial Cancer QPI Groups have not been able to identify sufficient evidence, or determine appropriate measurability specifications, to address all areas felt to be of key importance in the treatment of cervical cancer, and therefore in improving the quality of care for patients affected by cervical cancer.

The following areas for future consideration have been raised across the lifetime of the Cervical Cancer QPIs.

Brachytherapy in the treatment of cervical cancer.

#### 9. Governance and Scrutiny

A national and regional governance framework to assure the quality of cancer services in NHSScotland has been developed; key roles and responsibilities within this are set out below. Appendices 5 and 6 provide an overview of these governance arrangements diagrammatically. The importance of ensuring robust local governance processes are in place is recognised and it is essential that NHS Boards ensure that cancer clinical audit is fully embedded within established processes.

#### 9.1 National

- Scottish Cancer Taskforce
  - Accountable for overall national cancer quality programme and overseeing the quality of cancer care across NHSScotland.
- Healthcare Improvement Scotland
  - Proportionate scrutiny of performance.
  - Support performance improvement.
  - Quality assurance: ensure robust action plans are in place and being progressed via regions/Boards to address any issues identified.
- Public Health Scotland (previously Information Services Division (ISD))

 Publish national comparative report on tumour specific QPIs and survival for three tumour types per annum and specified generic QPIs as part of the rolling programme of reporting.

#### 9.2 Regional – Regional Cancer Networks

- Annual regional comparative analysis and reporting against tumour specific QPIs.
- Support national comparative reporting of specified generic QPIs.
- Identification of regional and local actions required and development of an action plan to address regional issues identified.
- Performance review and monitoring of progress against agreed actions.
- Provide assurance to the NHS Board Chief Executive Officers and the Scottish Cancer Taskforce that any issues identified have been adequately and timeously progressed.

#### 9.3 Local – NHS Boards

- Collect and submit data for regional comparative analysis and reporting in line with agreed measurability and reporting schedule (generic and tumour specific QPIs).
- Utilise local governance structures to review performance, develop local action plans and monitor delivery.
- Demonstrate continual improvements in quality of care through on-going review, analysis and feedback of clinical audit data at an individual multidisciplinary team (MDT) or unit level.

#### 10. References

- Scottish Government (2016). Beating Cancer: Ambition and Action (accessed December 2016). Available online from: <a href="https://www.gov.scot/publications/beating-cancer-ambition-action/">https://www.gov.scot/publications/beating-cancer-ambition-action/</a>
- British Gynaecological Cancer Society (BGCS) Cervical Cancer Guidelines: Recommendations for Practice. (accessed May 2020).
- 3. Scottish Intercollegiate Guidelines Network (2008). Management of Cervical Cancer: a National Clinical Guideline, 2008 Jan 1. (accessed December 2012)
- 4. Greer et al (2010). Cervical Cancer: Clinical Practice Guidelines in Oncology. Journal of the National Comprehensive Cancer Network. 12,1388-416.
- Green et al (2005). Concomintant chemotherapy and radiation therapy for cancer of the unterine cervix. The Cochrane Library 2005, Issue 3. (accessed January 2014) Available online from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/11687152">https://www.ncbi.nlm.nih.gov/pubmed/11687152</a>
- 6. Peters et al (2000). Concurrent Chemotherapy and Pelvic Radiatio Therapy Compared with Pelvic Radiation Therapy Alone as Adjuvant Therapy After Radical Surgery in High Risk Early Stage Cancer of the Cervix. Journal of Clinical Oncology. 18(8), 1606-1613.
- 7. Perez et al (1995). Carcinoma of the uterine cervix. Impact of prolongation of overall treatment time and timing of brachytherapy on outcome of radiation therapy. International Journal of Radiation: Oncology, Biology and Physics. 32(5), 1275-1288.
- Royal College of Radiologists (2008). The timely delivery of radical radiotherapy: standards and guidelines for the management of unscheduled treatment interruptions, Third edition 2008. London: The Royal College of Radiologists. (accessed January 2014). Available online from: <a href="https://www.rcr.ac.uk/docs/oncology/pdf/BFCO(08)6">https://www.rcr.ac.uk/docs/oncology/pdf/BFCO(08)6</a> Interruptions.pdf
- 9. McCann et al (2013). The impact of close surgical margins after radical hysterectomy for early stage cervical cancer. Gynecological Oncology. 128(1), 44-48.
- 10. Verleye et al (2006) Quality Assurance for radical hysterectomy for cervical cancer: the view of the European Organization for Research and Treatment of Cancer Gynecological Cancer Group (EORTC-GCG). Annals of Oncology. 20, 1631-1638.
- 11. NHS Quality Improvement Scotland (2008). Management of Core Cancer Services Standards. (accessed September 2017).
- Downing A, et al (2016). High Hospital Research Participation and Improved Colorectal Cancer Survival Outcomes: A Population Based Study. Gut 0:1–8. doi:10.1136/gutjnl-2015-311308. (accessed October 2017) Available from: http://gut.bmj.com/content/66/1/89
- 13. Brouwers M, Kho ME, Browman GP, Burgers JS, Cluzeau F, Feder G, Fervers B, Graham ID, Grimshaw J, Hanna S, Littlejohns P, Makarski J, Zitzelsberger L for the AGREE Next Steps Consortium (2010). AGREE II: Advancing guideline development, reporting and evaluation in healthcare. Can Med Assoc J. 182(18), E839-E842 (accessed August 2013). Available online from:

http://www.cmaj.ca/content/182/18/E839.full.pdf+html?maxtoshow=&hits=10&RESU %20LTFORMAT=&fulltext=brouwers&searchid=1&FIRSTINDEX=0&volume=182&is sue=%2018&resourcetype=HWCIT%2520%2520%2520

#### 11. Appendices

#### **Appendix 1: QPI Development Process**

#### **Preparatory Work and Scoping**

The preparatory work involved the development of a structured briefing paper by Healthcare Improvement Scotland. This paper took account of existing, high quality, clinical guidance and provided a basis for the development of QPIs.

The scope for development of Cervical Cancer QPIs and a search narrative were defined and agreed by the Cervical and Endometrial Cancer QPI Development Group. The table below shows the final search criteria used in the literature search.

Inclusion	Exclusion
Inclusion  Cervical cancer types:  Primary cervical cancer (including: squamous, adenocarcinoma and adenosquamous carcinoma)  Interventions:  Diagnosis Staging Surgical management of disease Non-surgical management of disease (chemotherapy, radiotherapy, brachytherapy)	<ul> <li>Exclusion</li> <li>Pre-cancerous conditions including: cervical intra-epithelial neoplasia (CIN) and glandular intra-epithelial neoplasia (GIN)</li> <li>Related cancers:         <ul> <li>Secondary/malignant cervical</li> <li>Neuroendocrine carcinomas</li> <li>Lymphomas</li> <li>Cervical sarcomas</li> </ul> </li> <li>Interventions:         <ul> <li>Clinical trials recruitment and protocols</li> <li>Communication, information sharing and support</li> </ul> </li> </ul>
Age range: Adults only  Date:	<ul> <li>Follow-up</li> <li>Palliative/end-of-life care (pain management, end-of-life counselling, hospice</li> </ul>
Language:	management)  • Prevention
Document type: Clinical guidelines	<ul> <li>Primary care/referral</li> <li>Recurrent disease/relapsed disease management</li> <li>Screening</li> <li>Symptom management (e.g. nausea and</li> </ul>
Table 4 Compined Conney Secret Criteria	vomiting, neutropenic sepsis)

Table 1 - Cervical Cancer Search Criteria

A systematic search was carried out by Healthcare Improvement Scotland using selected websites and two primary medical databases to identify national and international guidelines.

Thirty two guidelines were appraised for quality using the AGREE II instrument<sup>13</sup>. This instrument assesses the methodological rigour used when developing a guideline. Eleven of the guidelines were recommended for use. A further 4 NHS accredited guidelines where included without appraisal. Overall, 7 guidelines for the management of cervical cancer were recommended for use.

#### **Indicator Development**

The Cervical and Endometrial Development Group defined evidence based measurable indicators with a clear focus on improving the quality and outcome of care provided.

The Group developed QPIs using the clinical recommendations set out in the briefing paper as a base, ensuring all indicators met the following criteria:

- Overall importance does the indicator address an area of clinical importance that would significantly impact on the quality and outcome of care delivered?
- **Evidence based** is the indicator based on high quality clinical evidence?
- Measurability is the indicator measurable i.e. are there explicit requirements for data measurement and are the required data items accessible and available for collection?

#### **Engagement Process**

A wide clinical and public engagement exercise was undertaken as part of development in April 2014 where the Cervical Cancer QPIs, along with accompanying draft minimum core dataset and measurability specifications, were made available on the Scottish Government website. During the engagement period clinical and management colleagues from across NHSScotland, patients affected by cervical cancer and the wider public were given the opportunity to influence the development of Cervical Cancer QPIs.

Draft documentation was circulated widely to professional groups, health service staff, voluntary organisations and individuals for comment and feedback.

Following the engagement period all comments and responses received were reviewed by the Cervical and Endometrial QPI Development Group and used to produce and refine the final indicators.

## Appendix 2: Cervical and Endometrial Cancer QPI Development Group Membership (2014)

Name	Designation	Cancer Network/Base
Lorna Bruce	Audit/IT Facilitator	SCAN
Kevin Burton	Consultant Gynaecological Oncologist	WoSCAN / NHS Greater Glasgow and Clyde
Kevin Campbell	Project Manager	WoSCAN
Moira Campbell	Patient Representative	
Mary Cairns (liaising with David Parkin)	Consultant Gynaecological Oncologist	NOSCAN / NHS Grampian
Richard Casasola	Consultant Clinical Oncologist	NOSCAN / NHS Tayside
Scott Fegan	Consultant Gynaecological Oncologist	SCAN / NHS Lothian and NHS Fife
Janet Galloway	Patient Representative	
Maria-Lena Gregoriades	Consultant Radiologist	SCAN / NHS Fife
Morton Hair	Consultant Gynaecological Oncologist	WoSCAN / NHS Greater Glasgow and Clyde
Rosie Harrand	Consultant Clinical Oncologist	WoSCAN / NHS Greater Glasgow and Clyde
Sophie Hepple	Consultant Radiologist	WoSCAN / NHS Greater Glasgow and Clyde
Simon Herrington	Consultant Pathologist	NOSCAN / NHS Tayside
Michelle Hilton-Boon	Programme Manager	Healthcare Improvement Scotland
Natasha Inglis	Consultant Pathologist	NOSCAN / NHS Highland
Annie Kennedy	Consultant Clinical Oncologist	NOSCAN / NHS Grampian
Cameron Martin	Consultant Gynaecologist and Subspecialist in Gynaecological Oncology	SCAN / NHS Lothian
Erica McGaughay	Clinical Nurse Specialist	NOSCAN / NHS Tayside
Colin McKay	Group Chair	WoSCAN / NHS Greater Glasgow and Clyde
Maureen McKay	Patient Representative	- Langer and orygo
Ethel Mclean	Audit Facilitator	WoSCAN / NHS Arran and Ayrshire
Rosie Millar	Macmillan Gynae Clinical Nurse Specialist	SCAN / NHS Grampian
Kathryn Morton	Clinical Pathologist	WoSCAN / NHS Forth Valley
Emma Ramage	Consultant Radiologist	NOSCAN / NHS Grampian

Name	Designation	Cancer Network/Base
Nadeem Siddiqui	Consultant Gynaecological	WoSCAN / NHS Greater
	Oncologist	Glasgow and Clyde
Azmat Sadozye	Consultant Clinical Oncologist	WoSCAN / NHS Greater
		Glasgow and Clyde
Smutra Shanbhag	Consultant Gynaecological	WoSCAN / NHS Greater
	Oncologist	Glasgow and Clyde
Allison Stillie	Consultant Clinical Oncologist	SCAN/ NHS Lothian
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN
Alistair Williams	Reader in Pathology	SCAN / NHS Lothian
Mark Zahra	Consultant Clinical Oncologist	SCAN / NHS Lothian

NOSCAN - North of Scotland Cancer Network SCAN - South East Scotland Cancer Network WoSCAN - West of Scotland Cancer Network

## **Appendix 3: Cervical and Endometrial Cancer Formal Review Group Membership (2018)**

Name	Designation	Cancer Network / Base
James Powell (Chair)	Consultant HPB Surgeon	SCAN / NHS Lothian
Kevin Burton	MCN Clinical Lead / Consultant Gynaecological Oncologist	WoSCAN / NHS Greater Glasgow & Clyde
Kevin Campbell	MCN Manager	WoSCAN / NHS Greater Glasgow & Clyde
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Ann-Maree Kennedy	Consultant Clinical Oncologist	NOSCAN / NHS Grampian
Cameron Martin	MCN Clinical Lead / Consultant Gynaecological Oncologist	SCAN / NHS Lothian
Wendy McMullen	Consultant Obstetrician and Gynaecologist	NOSCAN / NHS Tayside
Azmat Sadozye	Clinical Director / Consultant Clinical Oncologist	WoSCAN / NHS Greater Glasgow & Clyde
Alison Stillie	Consultant Clinical Oncologist	SCAN / NHS Lothian
Lorraine Stirling	Project Officer	National Cancer Quality Programme
Christine Urquhart	Audit Manager	NOSCAN
Mark Zahra	Consultant Clinical Oncologist	SCAN / NHS Lothian

Formal review of the Cervical Cancer QPIs has been undertaken in consultation with various other clinical specialties.

NOSCAN - North of Scotland Cancer Network SCAN - South East Scotland Cancer Network WoSCAN - West of Scotland Cancer Network

## **Appendix 4: Cervical and Endometrial Cancer Formal Review Group Membership (2021)**

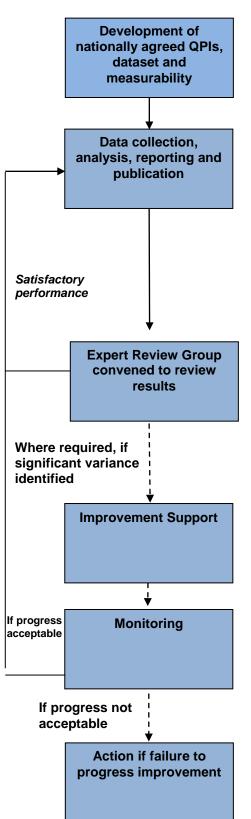
Name	Designation	Cancer Network / Base
Ioanna Nixon (Chair)	Consultant Clinical Oncologist	WoSCAN
Kevin Burton	MCN Clinical Lead	WoSCAN
Enhsun Choi	Radiologist	WoSCAN
Jen Doherty	Project Co-ordinator	National Cancer Quality Programme
Sophie Hepple	Consultant Radiologist	WoSCAN
Rosie Harrand	Consultant Clinical Oncologist	WoSCAN
Ann-Maree Kennedy	MCN Clinical Lead	NCA
Cameron Martin	MCN Clinical Lead	SCAN
Julie McMahon	Information Analyst	WoSCAN
Alison Stillie	Consultant Clinical Oncologist	SCAN
Lorraine Stirling	Project Officer	National Cancer Quality Programme
Evelyn Thomson	Regional Manager (Cancer)	WoSCAN)

Formal review of the Cervical Cancer QPIs has been undertaken in consultation with various other clinical specialties.

NCA - North Cancer Alliance SCAN - South East Scotland Cancer Network WoSCAN - West of Scotland Cancer Network

## **Appendix 5: 3 Yearly National Governance Process & Improvement Framework for Cancer Care**

This process is underpinned by the annual regional reporting and governance framework (see appendix 6).



#### 1. National QPI Development Stage

 QPIs developed by QPI development groups, which include representation from Regional Cancer Networks, Healthcare Improvement Scotland, ISD, patient representatives and the Cancer Coalition.

#### 2. Data Analysis Stage:

- NHS Boards and Regional Cancer Advisory Groups (RCAGs)\* collect data and analyse on yearly basis using nationally agreed measurability criteria and produce action plans to address areas of variance, see appendix
- Submit yearly reports to ISD for collation and publication every 3 years.
- National comparative report approved by NHS Boards and RCAGs.
- ISD produce comparative, publicly available, national report consisting of trend analysis of 3 years data and survival analysis.

#### 3. Expert Review Group Stage (for 3 tumour types per year):

- Expert group, hosted by Healthcare Improvement Scotland, review comparative national results.
- Write to RCAGs highlighting areas of good practice and variances.
- Where required NHS Boards requested to submit improvement plans for any outstanding unresolved issues with timescales for improvement to expert group.
- Improvement plans ratified by expert group and Scottish Cancer Taskforce.

#### 4. Improvement Support Stage:

 Where required Healthcare Improvement Scotland provide expertise on improvement methodologies and support.

#### 5. Monitoring Stage:

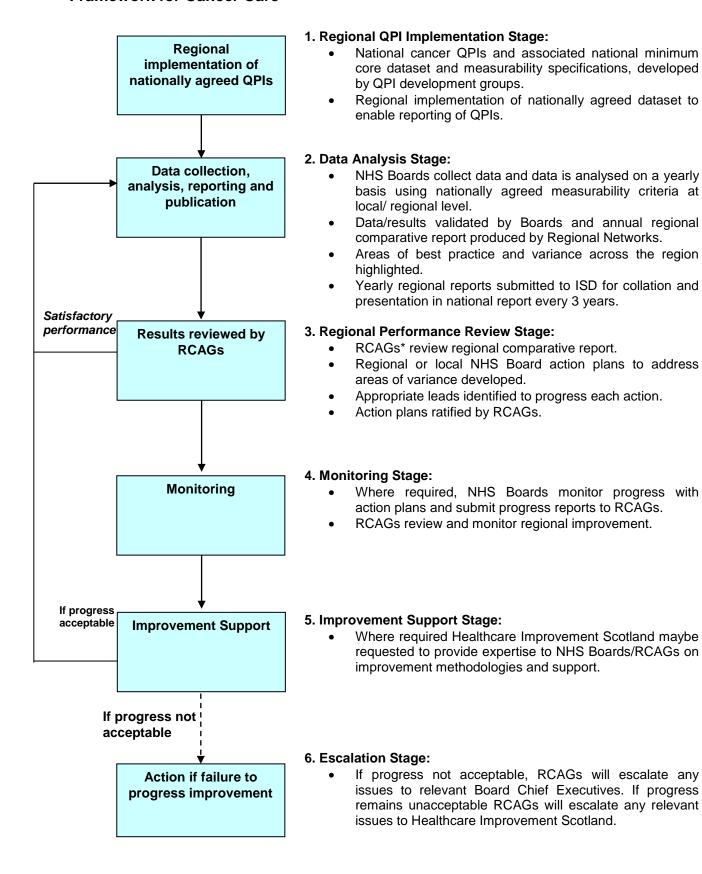
- RCAGs work with Boards to progress outstanding actions, monitor improvement plans and submit progress report to Healthcare Improvement Scotland.
- Healthcare Improvement Scotland report to Scottish Cancer Taskforce as to whether progress is acceptable.

#### 6. Escalation Stage:

- If progress not acceptable, Healthcare Improvement Scotland will visit the service concerned and work with the RCAG and Board to address issues.
- Report submitted to Scottish Cancer Taskforce and escalation with a proposal to take forward to Scottish Government Health Department.

<sup>\*</sup> The Regional Cancer Planning Group (South and East of Scotland) and the North Cancer Clinical Leadership Group (North Cancer Alliance) are equivalent to the Regional Cancer Advisory Group (RCAG) in the West of Scotland.

## Appendix 6: Regional Annual Governance Process and Improvement Framework for Cancer Care



<sup>\*</sup> The Regional Cancer Planning Group (South and East of Scotland) and the North Cancer Clinical Leadership Group (North Cancer Alliance) are equivalent to the Regional Cancer Advisory Group (RCAG) in the West of Scotland.

## **Appendix 7: Glossary of Terms**

	The abdoman contains the stempoh liver kidneys
Abdomen	The abdomen contains the stomach, liver, kidneys, bladder, in women it also contains the ovaries and
	uterus.
Bilateral	Affecting both the right and left sides of the body.
Bilateral Salpingo-	A bilateral salpingo-oophorectomy is a surgery in which
Oopherectomy	both of a woman's ovaries are removed, along with the
Copherectomy	fallopian tubes.
Brachytherapy	Brachytherapy is a specific type of radiotherapy where
Brachymerapy	the treatment is given directly into, or very close to, the
	tumour.
Chemotherapy	The use of drugs that kill cancer cells, or prevent or
onomourorapy	slow their growth.
Computed Tomography (CT)	An x-ray imaging technique, which allows detailed
compatou romograpny (cr)	investigation of the internal organ of the body.
Co-morbidities	The presence of one or more additional disorders or
	diseases.
Contraindication/	A symptom or medical condition that makes a particular
Contraindicated	treatment or procedure inadvisable because a person is
	likely to have a bad reaction.
Diagnosis/Diagnosed	The process of identifying a disease, such as cancer,
2.ug00.0, 2.ug000u	from its signs and symptoms.
External Beam Radiotherapy	The most common form of radiotherapy. An external
(EBRT)	source of radiation is pointed at a particular part of the
,	patient's body.
First-line/Primary treatment	Initial treatment used to reduce or treat a cancer.
Histological/	The study of the structure, composition and function of
Histopathogical/Histology	tissues under the microscope, and their abnormalities.
Laparoscopic Surgery	Laparoscopic surgery, also called minimally invasive
	surgery or keyhole surgery, is a surgical technique in
	which operations in the abdomen are performed through
	small incisions (usually 0.5-1.5 cm) as opposed to the
	larger incisions.
Magnetic Resonance	A procedure in which radio waves and a powerful
Imaging (MRI)	magnet linked to a computer is used to create detailed
	pictures of areas inside the body. These pictures can
	show the difference between normal and diseased
	tissue.
Morbidity	How much ill health a particular condition causes.
Mortality	Either (1) the condition of being subject to death; or (2)
	the death rate, which reflects the number of deaths per
	unit of population in any specific region, age group,
	disease or other classification, usually expressed as
Maria: alle alle lles anno Anno	deaths per 1000, 10,000 or 100,000.
Multi-disciplinary team	A meeting which is held on a regular basis, which is
meeting (MDT)	made up of participants from various disciplines
	appropriate to the disease area, where diagnosis,
	management, and appropriate treatment of patients is
Palliative	discussed and decided.
raillative	Anything which serves to alleviate symptoms due to the
Pathological	underlying cancer but is not expected to cure it.
Pathological	The study of disease processes with the aim of
	understanding their nature and causes. This is achieved by observing samples of fluid and tissues obtained from
	the living patient by various methods, or at post mortem.
	the living patient by various methods, or at post morten.

Pathologist	A doctor who identifies diseases by studying cells and tissues under a microscope.
Pelvic/Pelvis	Having to do with the pelvis (the lower part of the abdomen located between the hip bones).
Positron emission	An imaging technique that produces a three-
tomography – computed	dimensional image of functional processes in the body
tomography (PET/CT)	by combining positron emission tomography
Progression	In medicine, the course of a disease, such as cancer,
	as it becomes worse or spreads in the body.
Radical Hysterectomy	During a radical hysterectomy the womb and
,	surrounding tissues are removed, including the fallopian
	tubes, part of the vagina, ovaries, lymph glands and
	fatty tissue.
Radical Radiotherapy	Radiotherapy given with curative intent.
Radiology	The medical specialty that employs the use of imaging
Radiology	to both diagnose and treat disease visualized within the
	human body.
Radiological	Of, relating to, or concerning radiology or the equipment
- Nadiological	used in radiology.
Pagest	To perform surgery to cut out part of (a bone, an organ,
Resect	or other structure or part)
Staging	Process of describing to what degree cancer has
Otaging	spread from its original site to another part of the body.
	Staging involves clinical, surgical and pathology
	assessments.
Surgery/Surgical resection	Surgical removal of the tumour/lesion.
Surgical intervention	A surgical measure with the purpose of improving
ourgiour micromion	health or altering the course of disease.
Surgical Margin	Surgical margin, refers to the visible normal tissue or
ourgroui margini	skin margin that is removed with the surgical excision of
	on in margin that is removed with the eargical excision of
	a tumour, growth, or malignancy. Surgical margin in a
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye.
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or
Survival	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.
Survival	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group
Survival	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group who are alive for a certain period of time after they were
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.
Survival Tumour size	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.  The size of a cancer measured by the amount of space
Tumour size	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.  The size of a cancer measured by the amount of space taken up by the tumour.
	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.  The size of a cancer measured by the amount of space taken up by the tumour.  Vaginal brachytherapy or vaginal vault brachytherapy is
Tumour size	a tumour, growth, or malignancy. Surgical margin in a surgery report defines the visible margin or free edge of "normal" tissue seen by the surgeon with the naked eye. Surgical margin as read in a pathology report defines the histological measurement of normal or unaffected tissue surrounding the visible tumour under a microscope on a glass mounted histology section. A "narrow" surgical margin implies that the tumor exists very close to the surgical margin, and a "wide" surgical margin implies the tumor exists far from the cut edge or the surgical margin.  The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer.  The size of a cancer measured by the amount of space taken up by the tumour.