The maximum microscopic depth of invasion of the most deeply invasive tumour must be recorded.\(^{25,33}\)

CS3.05a The depth of invasion has prognostic implications and defines stage 1A tumours and pre-clinical cancers of a higher stage.\(^{13}\)

CS3.05b Depth of invasion as defined by FIGO should be taken from the base of the epithelium of the original tissue – superficial or glandular.

Depth of invasion is measured from the basement membrane of the epithelium from which the tumour is considered to arise, to the deepest point of invasion.

The issue of depth of invasion is a problematic one in the cervix as identification of the epithelium of the original tissue may not be obvious. The issue is not resolved, however until consensus has been reached regarding a more optimal method we are following FIGO staging.\(^3\)

The implication of depth of invasion would intuitively mean the degree of stromal invasion below an imaginary line from the adjacent normal tissue, and in the case of a largely exophytic tumour could potentially be a small measurement. However FIGO refers to the original tissue and if the epithelium from which the tumour arises cannot be identified then what is defined as depth of invasion also equates to tumour thickness.\(^{33}\) Whilst two measurements could be given in exophytic tumours this would be potentially confusing and we currently advocate retaining the term depth (which in some instances will equate to thickness).

For squamous cell carcinoma depth is measured from the basement membrane of the surface epithelium or from the basement membrane of a crypt involved by CIN, if this clearly the origin of the carcinoma. Refer to Figure 6a below.

For adenocarcinoma the epithelium from which the tumour arises may be the surface epithelium or a deeper endocervical gland. In practice for many adenocarcinomas it is difficult to establish the gland of origin and invasive depth is by convention measured from the nearest surface epithelium, which equates to tumour thickness.\(^{14,34}\) Refer to Figure 6b below.

CS3.05c If there is ulceration over the surface at the deepest point of invasion, measurement is from the ulcerated surface and this should be stated. (Ulceration is recorded at G3.04)

CS3.05d If the deepest point of invasion involves the margin of the specimen, comment should be made addressing the possibility of underestimation of the depth of invasion in the specimen (particularly applicable to cone biopsy and radical trachelectomy specimens).

CS3.05e In the case of multiple tumours, the individual depths of each lesion should be listed or a range provided.
Figure 6a  Example of depth of invasion and horizontal size measurements for squamous cell carcinoma including multifocal tumours.

Block 1

The diagram shows two consecutive blocks of cervix. The largest tumour (1) has a depth of invasion of (a), a horizontal measurement of (b) x approximately 2x(c) (as two consecutive blocks are involved by tumour). There are two other apparently separate smaller foci of invasion (2) and (3), which measure (e) and (g) in maximal dimension, with depth of invasion of (d) and (f) respectively. Note tumour 2 arises from vertically orientated epithelium and the depth of invasion is measured from the basement membrane of origin.
Microscopic tumour measurements must be made in millimetres.

Descriptive terminology without clarification (by measurements in millimetres) regarding degree of invasion should be avoided.\(^{32}\)

The provision of actual measurements in millimetres avoids confusion with terminology.

Whilst there is no doubting the importance of identifying carcinomas which can be treated with less radical therapy, there has been no consensus regarding the size of such lesions and whether such terms apply to both squamous and adenocarcinomas.

Descriptive terminology which is commonly in use is provided for clarification in Appendix 6. In this document due to lack of uniform consensus on definitions, descriptive terminology is not used.

Appendix 6  Descriptive terminology relating to extent of invasion in cervical carcinoma

Individualised treatment for cervical carcinoma is based on a number of variables including the extent of disease. Undoubtedly cervical carcinomas having lesser degrees of invasion need to be separated from those with more extensive disease. Whilst staging relates to extent of disease, a number of descriptive terms for carcinomas showing limited invasion are also in use. In certain institutions such terms may be frequently used and locally understood. Terminology is however not uniform and for this reason, in this document we suggest provision of actual measurements. The following commentary refers to descriptive terminology that may be in use and is provided for clarification purposes.

**Early stromal invasion** pertains to squamous lesions and is defined by WHO as an “unmeasurable” lesion, less than 1mm in depth. The term early stromal invasion may have some disadvantages, possibly falsely implying a temporal connotation. This term is used to describe epithelial buds arising from the base of CIN lesions. We recommend measuring such lesions, for example as fractions of a millimetre or simply “less than 1mm”. These cases remain in the most recent FIGO staging system for carcinoma of cervix as 1A1, and fall within the FIGO microinvasive category, however are considered by most as having a similar prognosis to an equivalent CIN lesion without early stromal invasion,\(^{31}\) and therefore should have similar therapy.

As defined by the WHO **early invasive squamous cell carcinoma** is “A squamous cell carcinoma with early stromal invasion, the extent of which has not been precisely defined, and a low risk of local lymph node metastasis.”

**Early invasive adenocarcinoma** is defined by the WHO as “a glandular neoplasm in which the extent of stromal invasion is so minimal that the risk of local lymph node metastasis is negligible.”

The term **microinvasive** has different connotations in different countries and is used for squamous cell carcinoma and adenocarcinoma.\(^3\) As defined by FIGO this term pertains to stage 1A lesions. The Society of Gynecologic Oncologists (SGO) developed a definition of microinvasive carcinoma of the cervix which was aimed to be a practical guide for treatment: An invasive tumour with stromal invasion (in \(\geq 1\) areas) to a depth of 3mm or less below the base of the epithelium and in which lymphatic or vascular involvement is not demonstrated. The entire lesion, including associated CIN3 is excised
and available for assessment.\textsuperscript{52} The SGO definition does not include an upper limit for horizontal tumour size.

The Lower Anogenital Squamous Terminology Standardization (LAST) Project\textsuperscript{3} for HPV-associated Lesions suggest the term \textit{superficially invasive squamous cell carcinoma} (SISCA) for an invasive squamous carcinoma of the cervix that:

- Is not a grossly visible lesion, AND
- Has an invasive depth of $\leq$3mm from the basement membrane of the point of origin, AND
- Has a horizontal spread on $\leq$7mm in maximal extent, AND
- Has been completely excised.