1. Guidelines for Reporting of Uterine, Cervical and Ovarian Malignancies

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1.1 Introduction

This booklet provides the guidelines for the histopathological reporting of cervical biopsy specimens and hysterectomy specimens removed for cervical, endometrial and ovarian malignancies. All the contents are evidence-based and define the minimum standards for reporting the above malignancies. These conform to a standard format and include a proforma. The proforma may be used as the main reporting format or may be combined with free text as required.

Histopathologists should be members of multidisciplinary teams dedicated to the diagnosis and management of patients with specific malignancies. Optimal reporting of gynaecological specimens requires a partnership between the pathologist and surgeon/oncologist. The surgeon can help the pathologist to provide the information necessary by the appropriate handling and labelling of the specimen in the operating theatre. Regular clinico-pathological discussions and correlation with pre-operative imaging studies, is important in maintaining and developing this partnership. Careful reporting of gross specimens is important because the pathological diagnosis will determine the future management and follow–up of the individual patient. The histopathological findings will also determine whether the patient receives further therapy based on the extent of spread and involvement of surgical margins.

These guidelines have been approved by the College of Pathologists of Sri Lanka and we advise their use as a minimum data set. Published audits elsewhere have shown that minimum data sets are very effective in ensuring that all necessary data are provided.

1.2 Guidelines for The Histopathological Reporting of Cervical Malignancy

The usual surgical procedure for a cervical cancer is a radical hysterectomy and lymph node dissection. A radical hysterectomy includes a vaginal cuff several centimeters wide, broad strips of parametria, and a variable proportion of the broad, round and uterosacral ligaments. In young women adnexae are often spared.

The size, site, growth type, depth and completeness of excision should be noted for a cervical tumour.

Macroscopic description- Grade X

Appearance –

Appearance of the tumour should be documented (eg:Polypoidal, ulcerative etc ….)

Size –

It may be difficult to measure the size of the tumour in three dimensions though this should be done wherever possible.

Site –

Large tumours are often circumferential and occupy the whole cervix. Smaller ones arise predominantly on the anterior or posterior lips.

Paracervix & parametria –

The pathologist should look for tumour extending through the full thickness of the cervical wall to reach the paracervix and parametrial fat. Small lymph nodes may be identified in the parametria.

Vagina –

Early disease will be difficult to assess as the fornices are often not apparent in the resected specimen. The margin of the vaginal cuff should be carefully examined.

Body of the uterus –

Although corpus disease does not change the stage of cervical cancer it does worsen prognosis. Macroscopic extension of tumour into the uterus should be noted. Any other pathological condition should also be mentioned.

Lymph nodes –

The number of lymph nodes affected by metastases and their location is of crucial importance to the clinician and determines whether postoperative radiotherapy will be given. Lymph node groups (R/obturator, L/obturator, R/internal iliac, L/internal iliac, R/external iliac, L/external iliac, R/common iliac, L/common iliac) from cases of cervical cancer should arrive in the laboratory in separate labelled pots. It is helpful to arrange and number the pots in a logical order, with right and left sides from similar sites being grouped together.

Handling of the specimen & blocks for histology –
Grade X

In a radical hysterectomy and lymphadenectomy specimen it is necessary to take numerous blocks.

The vaginal cuff may be removed from the cervix. The circumference of the vaginal resection line can be blocked in strips in one or two cassettes. It is important to note that the vagina may be involved by tumour in submucosal lymphatic channels, while the mucosa remains normal

.

The cervix should be inked to identify the anterior and posterior margins and separated from the uterus 2.5cm above the external os. The entire cervix should be longitudinally sliced, 3mm apart, parallel to the endocervical canal starting at the 12 o'clock position and moving clockwise.

Sections that are thought to be most useful should be chosen. Blocks should allow the assessment of tumour characteristics, anterior and posterior margins, right and left sides of the cervix, paracervical and parametrial involvement. The lateral parametrial blocks should also be sampled by sagittal parallel slices, beginning closest to the cervix and paying attention to any thickening or induration. All lymph nodes present in the parametrium should be sampled. Blocks of the upper endocervix/isthmus may also be taken.

If a tumour cannot be found macroscopically, then the entire cervix should be blocked out sagittally.

The remainder of the uterus and adnexae should be sampled according to a "benign conditions" protocol.

Lymph node groups- Lymph node groups should be sampled separately. Total number of nodes retrieved in each group should be mentioned. A full cross section of each lymph node has to be sampled.

Blocks for histology –

- Tumour
- Vaginal,parametrial & paracervical margins
- Endometrium + myometrium
- Bilateral adnexae
- Lymph node groups

Histological Reporting – Grade X

Histological type –

There are different histological types of cervical carcinoma. Certain variants have an excellent prognosis while some tumours have a poor prognosis. Therefore it is important to document the histological type of the tumour.

Tumour grade –

Histological differentiation of the tumour (well, moderate, poor) should be noted.

Tumour size/ depth of invasion –

The maximum horizontal dimensions of tumours and its maximum depth of invasion should be recorded.

The latter should be expressed relative to the overall thickness of the cervical wall, by measuring the minimum tumour free cervical stromal rim. It is also useful to document where the tumour comes closest to the resection margin (anterior, posterior, right, left)

Vascular invasion and lymph node status –

Vascular invasion and lymph node status should be recorded. The total number of lymph nodes in each group, the number of positive lymph nodes and the presence or absence of extra nodal spread should be documented.

Paracervical, parametrial and vaginal margins

It is important to record the status of the paracervical, parametrial and vaginal resection margins, as this is crucial in determining whether the patient receives adjuvant radiotherapy. The distance from the closest resection margin (minimum tumour free rim) should be noted

1.2.1 National Minimum Dataset- Cervical Cancer Histopathology Report

Name: Age: Sex:
Hospital: BHT: Ward:
Date of surgery:
Consultant Obstetrician & Gynaecologist :
Reporting Pathologist:

- Specimen type
- Dimensions
  - Uterus & cervix together
  - Diameter of the external os
  - Vaginal cuff
  - R/ovary and tube
  - L/ovary and tube
  - Parametrium
- Tumour type
- Tumour grade
- Tumour site & size
- Depth of invasion
- Lymphovascular invasion
- Surgical Margins- (distance from closest margin)
  - Vaginal -
  - Paracervical –
  - Parametrial-
- Endometrium & Myometrium
- Vaginal involvement
- Bilateral adnexae

- Additional histological findings
- Lymph node groups- right left
  - Obturator -
  - Internal iliac -
  - External iliac -
  - Common iliac -
  - Total number retrieved -
  - Number of (+) nodes -
  - Extranodal spread –
- Pathological stage- TNM/ FIGO (annexure 1.0)

Signature…….. Date……
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1.2.2 Guidelines for the Histopathological Reporting of Cervical Biopsy Specimens

Careful reporting of cervical biopsy specimens is important because the histological diagnosis will determine the future management and follow-up of the individual patient. It is essential that all of the tissue received be processed, no matter how small. Always carefully search the container and the underside of the lid for tiny fragments of tissue.

Macroscopic description – Grade X

Type of cervical biopsy should be noted. Eg: Punch biopsy, wedge biopsy, cone biopsy, loop excision.

Number of pieces received, colour and size has to be documented.

Carefully examine for the presence or absence of epithelium, epithelial irregularities and erosions/ulcers.

Handling of the specimen & blocks for histology – Grade X

Submit the material in its entirety.

Do not cut the specimen unless the individual pieces are greater than 4mm.

If specimens are received with a specific identification (eg: anterior lip, posterior lip) label and submit them separately.

Histological Reporting – Grade X

All biopsy specimens should include a comment on the following –

- The presence or absence of cervical intraepithelial neoplasia and , if present the grade (CIN 1,2,3)
- The presence or absence of cervical glandular intraepithelial neoplasia and, if present the grade (low grade or high grade)
- The presence or absence of invasion. If invasion is present the tumour type, grade, size of the lesion (maximum horizontal dimension and maximum depth of invasion) and presence or absence of lymphovascular invasion should be noted.
- The presence of koilocytosis or other human papilloma virus associated features.
- The adequacy of excision of the neoplastic lesion. (endocervical edge, ectocervical edge and the deep margin)

1.2.3 National Minimum Dataset – Cervical Biopsy Histopathology Report

Name: Age: Sex:
Hospital: BHT: Ward:
Date of surgery:
Consultant Obstetrician & Gynaecologist:
Reporting Pathologist:

- Type of cervical biopsy:
- Size:
- Appearance:
- HPV associated changes:
- Cervical Intraepithelial Neoplasia (CIN): Grade:
- Endocervical epithelium:
  Normal -
  Low grade CGIN -
  High grade CGIN -
- Endocervical edge:
- Ectocervical edge :
- Deep margin :
- Invasive malignancy:

Signature …….. Date ……..

1.2.4 Annexure 1.0

TNM Categories	FIGO Stages	
TX		Primary tumor cannot be assessed
T0		No evidence of primary tumor
Tis	0	Carcinoma *in situ*
T1	I	Cervical carcinoma confined to uterus (extension to corpus should be disregarded)
T1a	IA	Invasive carcinoma diagnosed only by microscopy. Stromal invasion with a maximum depth of 5.0 mm measured from the base of the epithelium and a horizontal spread of 7.0 mm or less. Vascular space involvement, venous or lymphatic, dose not affect classification.
T1a1	IA1	Measured stromal invasion 3.0 mm or less in depth and 7.0mm or less in horizontal spread.
T1a2	IA2	Measured stromal invasion more than 3.0mm and not more than 5.0mm with a horizontal spread 7.0mm or less

T1b	IB	Clinically visible lesion confined to the cervix or microscopic lesion greater than T1a/IA2
T1b1	IB1	Clinically visible lesion 4.0cm or less in greatest dimension
T1b2	IB2	Clinically visible lesion more than 4.0cm in greatest dimension
T2	II	Cervical carcinoma invades beyond uterus but not to pelvic wall or to lower third of vagina
T2a	IIA	Tumor without parametrial invasion
T2b	IIB	Tumor with parametrial invasion
T3	III	Tumor extends to pelvic wall and/ or involves lower third of vagina, and/ or cause hydronephrosis or non-functioning kidney
T3a	IIIA	Tumor involves lower third of vagina, no extension to pelvic wall
T3b	IIIB	Tumor extends to pelvic wall and/ or causes hydronephrosis or non-functioning kidney
T4	IVA	Tumor invades mucosa of bladder or rectum, and/or extends beyond true pelvis (bullous oedema is not sufficient to classify a tumor as T4)

Regional Lymph Nodes (N)

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph nodes metastasis
N1	Regional lymph nodes metastasis

Distant Metastasis (M)

MX		Distant metastasis cannot be assessed
M0		No distant metastasis
M1	IVB	Distant metastasis

Stage Grouping

Stage	0	Tis	N0	M0
Stage	I	T1	N0	M0
Stage	IA	T1a	N0	M0
Stage	IA1	T1a 1	N0	M0
Stage	IA2	T1a2	N0	M0
Stage	IB	T1b	N0	M0
Stage	IB1	T1b1	N0	M0
Stage	IB2	T1b2	N0	M0
Stage	II	T2	N0	M0
Stage	IIA	T2a	N0	M0

Stage	IIB	T2b	N0	M0
Stage	III	T3	N0	M0
Stage	IIIA	T3a	N0	M0
Stage	IIIB	T1	N1	M0
		T2	N1	M0
		T3a	N1	M0
		T3b	Any N	M0
Stage	IVA	T4	Any N	M0
Stage	IVB	Any T	Any N	M1

pTNM Pathologic classification-The pT, pN and pM categories correspond to the T, N and M categories.

1.3 Guidelines for the Histopathological Reporting of Endometrial Malignancy

A protocol for the histopathological reporting of endometrial carcinoma is provided. The careful reporting of hysterectomy specimens removed for endometrial carcinoma is important because the FIGO surgical staging system for endometrial cancer is based on histopathological findings in the uterus, including myometrial invasion. These findings are important in determining the prognosis and management of the patient.

Macroscopic description – Grade X

- Type of specimen should be noted (radical/ total with or without salpingectomy and oophorectomy)
- Measurements - measure the uterus and cervix together. Size of both ovaries, tubes and parametrium (if present) should be noted.
- Lymph nodes- if lymph nodes are included (radical hysterectomy) separate them in to right and left obturator, right & left internal iliac, right and left external iliac and right and left common iliac groups. Total number of lymph nodes in each group has to be recorded.Ink the serosal surface of the uterus and open coronally and then section transversely 3mm apart.

- Tumour-Appearance- solid, polypoidal, ulcerated, necrotic, hemorrhagic
  Size and the site of tumour has to be noted. Measure maximum depth of myometrial invasion, the overall thickness of the myometrium and the minimum distance of tumour from the serosal surface in millimeters.Macroscopic involvement of cervix, parametrium and uterine cornua should be recorded.

- Examine rest of the uterus for any other pathology eg : fibroids

Handling of the specimen & blocks for histology – Grade X

Staging system is based on the findings in the uterus, and because deep myometrial or serosal involvement cannot always be visualized grossly, it is imperative that the pathologist adequately samples the uterine corpus and cervix for microscopic examination.

Blocks of the tumour should be full thickness through the uterus so that the depth of myometrial invasion can be assessed histologically. Blocks should be labelled to indicate where they are taken from. If the

myometrium is too thick for a single cassette, use two cassettes with appropriate designations.

Adjacent non-neoplastic endometrium should be sampled to look for presence or absence of endometrial

hyperplasia. More aggressive endometrial carcinoma subtypes are unassociated with endometrial hyperplasia.

Representative sections from cervix, uterine cornua, parametrium and bilateral adnexae should be blocked to assess the extent of spread.

A full cross section of each lymph node should be blocked after recording the total number in each group.

Blocks for histology

- Tumour
- Maximum depth of myometrial invasion
- Non-neoplastic endometrium
- Cervix
- Parametrium
- Bilateral adnexae
- Lymph node groups

Histological reporting – Grade X

Endometrial carcinoma represents a biologically and morphologically diverse group of tumours. Several studies over the past years have shown the importance of recognizing specific subtypes and accurately grading carcinomas to predict prognosis and planning treatment. The clinical relevance of subtyping and grading endometrial carcinomas is reflected in the revised WHO classification and FIGO staging system. It is

recommended that the pathologist uses the revised WHO classification and bases the grading of endometrioid carcinomas on the recommendations of FIGO. That is,

the diagnosis should be based partly on the glandular morphology of the neoplasm and partly on the nuclear grade.

Serous carcinoma, clear cell carcinoma, squamous and undifferentiated carcinoma are not graded, as these tumours are basically highly malignant neoplasms. Serous carcinoma, clear cell carcinoma and undifferentiated carcinoma of large cell type usually exhibit Grade 3 nuclear abnormalities.

In adenocarcinoma with squamous differentiation, the tumour is graded according to the grade of the glandular component.

Cervical stromal involvement - Recording invasion of the cervical stroma is important. Superficial spread along the endocervical lumen does not have the same prognostic implications.

Vascular space involvement – A comment should always be made on the presence or absence of vascular space involvement.

Recommendations to the Gynaecologists-

Inject formalin in to the endometrial cavity using a 10cc syringe, before sending the specimen to the laboratory.

1.3.1 National Minimum Data Set – Endometrial Carcinoma Histopathology Report

Name: Age: Sex:
Hospital: BHT: Ward:
Date of surgery:
Consultant Obstetrician & gynaecologist:
Reporting Pathologist:

- Specimen type
- Dimensions – Uterus & cervix together-
  Bilateral adnexae-
  Parametrium-
- Tumour-
  Type-
  Size & site-
  Grade- FIGO grade (only applies to endometrioid carcinoma)
- Myometrial thickness at the point of maximum invasion
- Maximum depth of invasion
- Serosal involvement

- Non-neoplastic endometrium- (presence or absence of hyperplasia / any other pathology)
- Lymphovascular invasion -
- Extent of spread – Lower uterine segment-
  Cervix-mucosa
  troma
  Uterine cornua-
  Parametrium-

- Bilateral ovaries and tubes- involved/uninvolved, any other pathology

- Lymphnode groups- right left
  Obturator
  Internal iliac
  External iliac
  Common iliac
  (Total number of lymphnodes retrieved in each group and number of positive nodes)

- Pathological Stage- TNM / FIGO (annexure 2.0)

Consultant Pathologist……. Date…….

1.3.2 Annexure 2.0

TNM Categories	FIGO Stages	
TX		Primary tumour cannot be assessed.
T0		No evidence of primary tumour.
Tis	0	Carcinoma *in situ*.
T1	I	Tumour confined to corpus uteri.
T1a	IA	Tumour limited to endometrium.
T1b	IB	Tumour invades less than one-half of the myometrium.
T1c	IC	Tumour invades one-half or more of the myometrium.
T2	II	Tumour invades cervix but does not extend beyond uterus.
T2a	IIA	Tumour limited to the glandular epithelium of the endocervix. There is no evidence of connective tissue stromal invasion.
T2b	IIB	Invasion of the stromal connective tissue of the cervix.

T3	III	Local and/or regional spread as defined below.
T3a	IIIA	Tumour involves serosa and/or adnexa (direct extension or metastasis) and/or cancer cells in ascites or peritoneal washings.
T3b	IIIB	Vaginal involvement (direct extension or metastasis)
T4	IVA	Tumour invades bladder mucosa and/or bowel mucosa (bullous oedema is not sufficient to classify a tumour as T4)
NX		Regional lymph nodes cannot be assessed.
N0		No regional lymph node metastasis.
NI	IIIC	Regional lymph node metastasis to pelvic and/or para-aortic nodes.

MX		Distant metastasis cannot be assessed.
MO		No distant metastasis.
MI	IVB	Distant metastasis (includes metastasis to abdominal lymph nodes other than para-aortic, and/or inguinal lymph nodes; excludes metastasis to vagina, pelvic serosa, or adnexa.)

Stage Grouping

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage IA	T1a	N0	M0
Stage IB	T1b	N0	M0
Stage IC	T1c	N0	M0
Stage II	T2	N0	M0
Stage IIA	T2a	N0	M0
Stage IIB	T2b	N0	M0
Stage III	T3	N0	M0

StageIIIA	T3a	N0	M0
Stage IIIB	T3b	N0	M0
Stage IIIC	T1	N1	M0
	T2	N1	M0
	T3	N1	M0
Stage IVA	T4	Any N	M0
Stage IVB	Any T	Any N	MI

pTNM Pathologic classification- The pT, pN & pM categories correspond to the T,N, and M categories.

1.4 Guidelines for the Histopathological Reporting of Ovarian Malignancy

Histological diagnosis and the extent of spread will determine the future management of the individual patient. Therefore careful examination of the hysterectomy specimen and accurate reporting are important. A protocol for the histopathological reporting of ovarian carcinoma is provided.

Macroscopic description – Grade X

Type of specimen should be noted.

Tumour- Dimensions and the appearance (unilocular/ multilocular,solid areas, papillary, necrotic) has to be noted.
Side – unilateral or bilateral disease
Capsule- carefully examine the capsule for implants, rupture or adhesions.
Surface involvement- check for tumour on the surface of both ovaries
Serosal deposits-remainder of the specimen has to be examined for the presence of serosal deposits.
Fallopian tubes- examine for tumour extension
Rest of uterus and cervix- look for tumour extension or any other pathology
If omentectomy has been done, carefully examine for tumour deposits.
Peritoneal biopsy- note down the size and the appearance of the biopsy

Handling of the specimen & blocks for histology- Grade X

Ensure adequate sampling of the tumour. If there is bilateral disease both lesions should be sampled. Many ovarian tumours are cystic and all locules should be opened with scissors or sliced through with a sharp knife. Examine for papillary excrescences and small solid foci, since these may reveal areas of malignancy. The best blocks of tumour are where the tissue is viable. Include the capsule and tumour, and include tumour with adjacent normal parenchyma. If residual uninvolved ovary/ovaries can be identified take separate sections.

Representative sections from the uterus, cervix and fallopian tubes should be sampled to assess the extension of tumour. Suspicious foci on the serosal surface should be sampled.

Peritoneal biopsy- **entire** sample has to be processed.

Sample representative areas from the omentum.

Histological reporting – Grade X

Tumour type and tumour grade are important prognostic factors that should be mentioned in the report. State of the capsule has to be mentioned.

Presence or absence of surface involvement and serosal deposits should be noted.

Involvement of the omentum and peritoneum should be documented.

Include any significant findings in the uterus, cervix and fallopian tubes.

1.4.1 National Miimum Dataset- Histopathological Reporting Of Ovarian Malignancy

Name : Age : Sex :
Hospital : BHT : Ward :
Date of surgery :
Consultant Obstetrician & Gynaecologist :
Reporting Consultant Pathologist :

- Specimen type-
- Dimensions –
- Tumour - Type & grade- Size -
  Unilateral/bilateral -
  Capsule- (intact or breached)
  Surface involvement- -
  Serosal deposits-
- Residual ovary/ovaries -
- Fallopian tubes -
- Uterus -
- Cervix -
- Omentum -
- Peritoneal biopsy (if present) –
- Peritoneal washings (if present) –
- Lymph node groups (if present) –
  Site -
  Total number retrieved -
  Number of positive nodes -
- Pathological stage – TNM / FIGO (annexure 3.0)

Consultant Pathologist……. Date.....

1.4.2 Annexure 3.0

TNM Categories	FIGO Stages	
TX		Primary tumor cannot be assessed
T0		No evidence of primary tumor
T1	I	Tumor limited to ovaries (one or both)
T1a	IA	Tumor limited to one ovary; capsule intact, no tumor on ovarian surface. No malignant cells in ascites or peritoneal washings*
T1b	IB	Tumor limited to both ovaries; capsule intact, no tumor on ovarian surface. No malignant cells in ascites or peritoneal washings*
T1c	IC	Tumor limited to one or both ovaries with any of the following: capsule ruptured, tumor on ovarian surface, malignant cells in ascites or peritoneal washings
T2	II	Tumor involves one or both ovaries with pelvic extension and/or implants

T2a	IIA	Extension and/or implants on uterus and/or tube(s). No malignant cells in ascites or peritoneal washings
T2b	IIB	Extension to and/or implants on other pelvic tissues. No malignant cells in ascites or peritoneal washings
T2c	IIC	Pelvic extension and/or implants (T2a or T2b) with malignant cells in ascites or peritoneal washings
T3	III	Tumor involves one or both ovaries with microscopically confirmed peritoneal metastasis outside the pelvis
T3a	IIIA	Microscopic peritoneal metastasis beyond pelvis (no macroscopic tumor)
T3b	IIIB	Macroscopic peritoneal metastasis beyond pelvis 2cm or less in greatest dimension
T3c	IIIC	Peritoneal metastasis beyond pelvis more than 2cm in greatest dimension and/or regional lymph node metastasis

*Note: The presence of non-malignant ascites is not classified. The presence of ascites does not affect staging unless malignant cells are present.

Note: Liver capsule metastasis T3/Stage III; liver parenchymal metastasis M1/Stage IV.

Pleural effusion must have positive cytology for M1/Stage IV.

Regional Lymph Nodes (N)

NX		Regional lymph nodes cannot be assessed
N0		No regional lymph node metastasis
N1	IIIC	Regional lymph node metastasis

Distant Metastasis (M)

MX		Distant metastasis can not be assessed
M0		No distant metastasis
M1	IV	Distant metastasis (exclude peritoneal metastasis)

pTNM Pathologic Classification. The pT, pN, and pM categories correspond to the T, N, and M categories.

STAGE GROUPING			
Stage I	T1	N0	M0
Stage IA	T1a	N0	M0
Stage IB	T1b	N0	M0
Stage IC	T1c	N0	M0
Stage II	T2	N0	M0
Stage IIA	T2a	N0	M0
Stage IIB	T2b	N0	M0
Stage IIC	T2c	N0	M0
Stage III	T3	N0	M0
Stage IIIA	T3a	N0	M0
Stage IIIB	T3b	N0	M0
Stage IIIC	T3c	N0	M0
	Any T	N1	M0
Stage IV	Any T	Any N	MI

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