5. CODING

Abstracted information should be coded first before captured into the computer.

5.1 PLACE OF RESIDENCE

Place of residence coding should follow the administrative subdivisions used in the census (for which population numbers are available), and, ideally, the same coding system. The coding scheme should be hierarchical – for example, going from region – district- sub-district – village.

[Example- Cancer registries of Mozambique]

HASC	CG	
MZ.NS.--	100	**Niassa district**
MZ.CD.--	200	**Cabo Delgado district**
MZ.NM.--	300	**Nampula district**
MZ.ZA.--	400	**Zambezia district**
MZ.TE.--	500	**Tete district**
MZ.MN.--	600	**Manica district**
MZ.SO.--	700	**Sofala district** desconhecido
MZ.SO.BC	→→	Cidade de Beira →→→→→
MZ.SO.BU	702	Buzi
MZ.SO.CA	703	Caia
MZ.SO.CM	704	Chemba
MZ.SO.CR	705	Cheringoma
MZ.SO.CB	706	Chibabava
MZ.SO.DO	707	Dondo
MZ.SO.GO	708	Gorongosa
MZ.SO.MC	709	Machanga
MZ.SO.MG	710	Maringue
MZ.SO.MM	711	Marromeu
MZ.SO.MU	712	Muanza
MZ.SO.NH	713	Nhamatanda
MZ.IN.--	800	**Inhambane district**
MZ.GA.--	900	**Gaza: district**
MZ.MP.--	*000*	**Maputo province**
MZ.MC.--	*010*	**Maputo city**: district desconhecido
MZ.MC.DU	*011*	Distrito Urbano Nº 1
MZ.MC.DD	*012*	Distrito Urbano Nº 2
MZ.MC.DT	*013*	Distrito Urbano Nº 3
MZ.MC.DQ	*014*	Distrito Urbano Nº 4
MZ.MC.DC	*015*	Distrito Urbano Nº 5
MZ.--.--	*080*	Mocambique: prov. desconhecido
	090	Outros países: África
	091	Outros países: Europa
	092	Outros países: Ásia
	093	Outros países: América
	099	Desconhecido

Cidade de Beira			
720	Barrio desconhecido		
721	Barrio 1	*733*	Barrio 13
722	Barrio 2	*734*	Barrio 14
723	Barrio 3	*735*	Barrio 15
724	Barrio 4	*736*	Barrio 16
725	Barrio 5	*737*	Barrio 17
726	Barrio 6	*738*	Barrio 18
727	Barrio 7	*739*	Barrio 19
728	Barrio 8	*740*	Barrio 20
729	Barrio 9	*741*	Barrio 21
730	Barrio 10	*742*	Barrio 22
731	Barrio 11	*743*	Barrio 23
732	Barrio 12	*744*	Barrio 24

5.2 ETHNIC GROUP

[Example – Eastern Cape Registry, South Africa]

1 WHITE	*4 BLACK: XHOSA*	*7 BLACK: TSWANA*
2 ASIAN	*5 BLACK: ZULU*	*8 BLACK: OTHER*
3 COLORED	*6 BLACK: SOTHO*	*9 UNKNOWN*

5.3 OCCUPATION

*Occupation may be coded according to a local (national) coding scheme (as used in the most recent **census**, for example), or an international coding scheme, such as the International Standard Classification of Occupations (ISCO-08) of the International Labour Organisation (ILO). The ISCO-08 table is shown on Appendix 4.*
For more details please visit http://www.ilo.org/public/english/bureau/stat/isco/isco08/

5.4 BASIS OF DIAGNOSIS

Code basis of diagnosis according to the codes on the right.

This coding scheme permits the distinction between tumours diagnosed on the basis of histology of a metastasis, or from the primary site, making the use of behaviour code /6 (and /9) unnecessary.

Code

0. Death certificate only

Non-microscopic

1. Clinical
2. Clinical investigation
4. Specific tumour markers

Microscopic

5. Cytology or haematology
6. Histology of a metastasis
7. Histology of a primary tumour

9. Unknown

5.5 SITE AND MORPHOLOGY OF TUMOUR (ICD-O)

Coding is according to the International Classification of Diseases for on Oncology (3rd Edition). Full instructions for coding are given in that book.

Topography

Code the ICD-O code (ranging from C00.0 to C 80.9) corresponding to the primary site of origin of the tumour. The decimal point (.) indicates subdivisions or sub-sites of the three character categories.

Do **NOT** code the site of any secondary/metastatic cancer (which may have been examined, for example, by a pathologist).

Code C80.9 is for unknown primary site.

Morphology

The five digit numerical list ranges from 8000/0 to 9989/1. The first four digits indicate the specific histology and the fifth digit after the slash is the behaviour of the tumour.

The diagnosis may be stated using non-specific terms instead of a specific histological type; for example malignant neoplasm, cancer etc. This will normally be the case if the basis of diagnosis is non-microscopic.

In such cases, morphology code 8000/3 should be used.

It is very unlikely (or impossible) for most specific morphological diagnoses to have been made without a histological (or cytological) examination. However, certain combinations are exceptions to this general rule, as shown in Table 5. 1.

MORPHOLOGY		Most Valid	Other criteria
Code	Description	Basis	
8800	(Sarcoma NOS)	2	
9590	Lymphoma NOS	1 or 2	
9800	Leukaemia NOS	1 or 2	
8720	Melanoma	1 or 2	
9140	Kaposi's sarcoma	1 or 2	HIV positive (exc. Africa)
8960	Nephroblastoma	2	Age 0-8
9100	Choriocarcinoma	4	Female, and age 15-49
9500	Neuroblastoma	2 or 4	Age 0-9
9510	Retinoblastoma	2	Age 0-5
9732	Myeloma	4	Age 40+
9761	Waldenström's macroglobulinaemia	4	Age 50+
8170	Hepatocellular carcinoma	4	
8150-8154	Islet cell tumours, gastrinomas	4	
9380	Glioma	2	C71.7 (brain stem)
9384/1	Subependymal giant cell astrocytoma	2	Tuberous sclerosis patient
9530-9539	Meningioma	2	C70
9350	Craniopharyngioma	2	
8270-8281	Pituitary tumours	4	C75.1

Table 5. 1 Combinations of specific morphology codes, and non-microscopic basis of diagnosis codes, which are considered acceptable

"NOS" means "Not Otherwise Specified". In the numerical list and in the alphabetical indexes,"NOS" is used to indicate that other modifiers of the term are listed elsewhere.

SUMMARY OF PRINCIPAL RULES FOR USING ICD-O, THIRD EDITION

RULE A. ***Topographic regions and ill-defined sites:*** If the diagnosis does not specify the tissue of origin, code the appropriate tissues suggested in the alphabetic index for each ill-defined site in preference to the "NOS" category.
Ill-defined sites, such as "arm", have several component tissues. For example, "squamous cell carcinoma of the arm" should be coded to C44.6 (skin of arm) rather than to C76.4 (arm, NOS).
See *ICD-O 3 Manual: Coding Guidelines*, *page 24*. There are a few exceptions to this, such as chin and forehead, because these regions are predominantly composed of skin, and the NOS category was therefore assigned to skin.

RULE B. ***Prefixes:*** If a topographic site is modified by a prefix such as peri-, para-, or the like which is not specifically listed in ICD-O, code to the appropriate ill-defined subcategory C76 (ill-defined site), unless the type of tumour indicates origin from a particular tissue. This general rule also applies to imprecise phrases such as "area of' or "region of '.
See *ICD-O 3 Manual: Coding Guidelines*, *page 25*.

RULE C. ***Tumours involving more than one topographic category or subcategory:*** Use subcategory".8" when a tumour overlaps the boundaries of two or more categories or subcategories and its point of origin cannot be determined.
See *ICD-O 3 Manual: Coding Guidelines*, page 25, and *Note, page 45.*

RULE D. ***Topography codes for lymphomas:*** If a lymphoma involves multiple lymph node regions, code to C77.8 (lymph nodes of multiple regions). Code extra nodal lymphomas to the site of origin, which may not be the site of the biopsy. If no site is indicated for a lymphoma, code to C77.9 (lymph node, NOS). Lymphomas occur in specific sites, for example stomach, as well as in one or more lymph nodes and therefore are not assigned a site-specific topography code. Lymphomas occurring in specific sites are called extra nodal.
See *ICD-O 3 Manual: Coding Guidelines*, *page 26* and *the malignant lymphoma section, page 13*.

RULE E. ***Topography code for leukaemias:*** Code all leukaemias except myeloid sarcoma (M-9930/3) to C42.1 (bone marrow).
See *ICD-O 3 Manual: Coding Guidelines, page 26.*

RULE F. ***Behaviour code in morphology:*** Use the appropriate 5th digit behaviour code (table below) even if the exact term is not listed in ICD-O. The use of the 5th digit behaviour code is explained in the ICD-O 3 Manual: Coding Guidelines.

Code	Definition
0	**Benign**
1	**Uncertain (Benign/Malignant)**
2	**In-situ**
3	**Malignant**

The appropriate 5th digit code should be used even if the exact term is not listed in ICD-O; for example, "benign chordoma" as a diagnosis should be coded M-9370/0. If the pathologist states that the behaviour differs from the usual behaviour as given in ICD-O, code as the pathologist indicates.

RULE G. ***Grading or differentiation code:*** **Assign the highest grade or differentiation code described in the diagnostic statement.** The use of the 6th digit for grading or differentiation of solid tumours is explained in the *ICD-O 3 Manual: Coding Guidelines, page 30*. If a diagnosis indicates two different degrees of grade or differentiation (such as "well and poorly differentiated" or "grades 11-m"), code to the higher grade.

This 6th digit may also be used for identifying the cell origin for lymphomas and leukaemias. In these lymphatic and hematopoietic diseases, T-cell (code 5), B-cell (code 6), Null cell (code 7), and NK cell (code 8) take priority over grade codes 1 to 4.

RULE H. *Site-associated morphology terms:* Use the topography code provided when a topographic site is not stated in the diagnosis. This topography code should be disregarded if the tumour is known to arise at another site. The appropriate site-specific codes are listed in parentheses after morphology terms for neoplasms that usually occur in the same site or tissue, for example "retinoblastoma" (C69.2). If no site is indicated in the diagnosis, use the suggested code.

If the site given differs from the site-specific code indicated for the morphologic type, use the appropriate code for the site given. This should be done only after thoroughly reviewing the case to ascertain that the neoplasm at the site mentioned is not a metastasis. Only three-character codes are given for some sites, for example C44.- (skin), because the appropriate fourth-digit cannot be assigned in advance.
See ICD-O 3 Manual: Coding Guidelines, page 32.

Certain neoplasms have names that could be interpreted as implying a topographic location (pseudotopographic morphology terms), but these entities should not necessarily be coded to that site. For example, bile duct carcinoma is a tumour frequently arising in intrahepatic bile duct of liver (C22.1).
See ICD-O 3 Manual: Coding Guidelines, page 33.

RULE J. *Compound morphology diagnoses:* Change the order of word roots in a compound term if the term is not listed in ICD-O. Not all forms of compound words are listed. For example,
"myxofibrosarcoma" is not in ICD-O but "fibromyxosarcoma" is. Check various permutations of the word roots if the first term is not found.
See ICD-O 3 Manual: Coding Guidelines, page 33.

RULE K. *Coding multiple morphology terms:* When no single code includes all diagnostic terms, use the numerically higher code number if the diagnosis of a single tumour includes two modifying adjectives with different code numbers. If a term has two or more modifying adjectives with different code numbers, code to the one with the highest code number, as it is usually more specific. For example a tumour described as a “transitional cell epidermoid carcinoma” should not be reported twice (one as transitional cell carcinoma M8120/3 and the other as “epidermoid carcinoma”M8070/3. Code 8120/3 should be assigned since it is the highest.
See ICD-O 3 Manual: Coding Guidelines, page 34.

5.6 CODING METASTATIC CANCERS

Adapted from ICD-10 coding rules (WHO, 2010)[4]

The expression "metastatic" is a problem mainly in the English language.
Neoplasms qualified as metastatic are always malignant, either primary or secondary.
However, the adjective "metastatic" is used in two ways, sometimes meaning a secondary from a primary elsewhere and sometimes denoting a primary that has given rise to metastases.

Although malignant cells can metastasize anywhere in the body, certain sites are more common than others and must be treated differently. These sites are listed in Table 5.2 below

Table 5.2 Common sites of metastases

Bone	Mediastinum
Brain	Meninges
Diaphragm	Peritoneum
Ill-defined sites (sites classifiable to C76)	Pleura
Liver	Retroperitoneum
Lung (see special instructions at (f))	Spinal cord
Lymph nodes	

(a) Malignant neoplasm "metastatic from"

If a malignant neoplasm is described as "metastatic from" a specified site, that site should be considered primary.

Example 1: Metastatic teratoma from ovary

The expression "metastatic teratoma from ovary" implies that the neoplasm originated in the ovary.
Code to ovary (C56).
This also applies to sites on the list of common sites of metastases.

Example 2: Metastatic mesothelioma from peritoneum

A "metastatic mesothelioma from peritoneum" is primary in the peritoneum, although peritoneum is one of the sites listed in Table 3.
Code to malignant mesothelioma of peritoneum (C45.1).

(b) Malignant neoplasm "metastatic to"

A malignant neoplasm described as "metastatic to" a specified site should be interpreted as a secondary neoplasm of the specified site, whether the site is on the list of common sites of metastases or not. Code to malignant neoplasm of unknown primary site (C80.9) if no primary site is indicated.

Example 3: Metastatic carcinoma to the rectum

The expression "metastatic to" indicates that rectum is a secondary site.
Code malignant neoplasm of unknown primary site (C80.9), since no primary site is indicated.

[4] International statistical classification of diseases and related health problems. - 10th revision, edition 2010. Volume 2. Instruction manual

If the morphology code has a "preferred site" in ICD-O (see Rule H, section 5.6) use the topography code provided as the primary site, when this is not stated in the diagnosis

Example 4: Metastatic osteosarcoma to brain
The expression "metastatic to brain" indicates that brain is a secondary site. However, the osteosarcoma is indexed to malignant neoplasm of bone (C40._ ; C41._) in the alphabetical Index of ICD-O.
Code unspecified malignant neoplasm of bone (C41.9)

(c) Malignant neoplasm metastatic of site A to site B
A malignant neoplasm described as metastatic of site A to site B should be interpreted as primary of site A and secondary of site B.

Example 5: Metastatic cancer of liver to brain
The expression "metastatic of liver to brain" indicates that the malignancy originated in the liver and spread to the brain.
Code to primary cancer of liver (C22.9).

(d) "Metastatic" malignant neoplasm on the list of common sites of metastases
A "metastatic" neoplasm is considered secondary if the site is on the list of common sites of metastases.

A neoplasm of a site in Table 5.2 is considered secondary, even if no other neoplasm is mentioned in the report. Note that a secondary malignant neoplasm should not be selected as the Primary site. If no primary tumour is reported, code the case to malignant neoplasm of unspecified site (C80.9).

Example 6: Metastatic brain cancer
Brain is one of the sites in Table 5.1, and the "metastatic" brain cancer is considered secondary. There is no primary neoplasm reported.
Therefore, code to malignant neoplasm of unknown primary site (C80.9).

(e) "Metastatic" malignant neoplasm not on the list of common sites of metastases
If a site that is not on the list of common sites of metastases is qualified as "metastatic" or "metastatic of", consider it primary and code to malignant primary of that particular site.

Example 7: Cervix cancer, metastatic
Cervix is not in Table 3, and the "metastatic" cervix cancer is therefore considered primary.
Code to malignant neoplasm of cervix (C53.9).

(f) "Metastatic" cancer of lung
The lung poses special problems in that it is a common site for both metastases and primary malignant neoplasms. Lung cancers can be both a primary or secondary, depending on other neoplasms reported in the source documents, if any.
If the only malignancy mentioned is "metastatic" neoplasm of lung, *code to primary malignant neoplasm of lung.*

Example 8: Metastatic carcinoma of lung
Code to primary malignant neoplasm of lung (C34.9) since no other site is mentioned.

If another malignancy is mentioned that is not on the list of common sites of metastases, consider lung secondary.

Example 9: Metastatic cancer of lung and stomach cancer
Since stomach cancer is also mentioned, "metastatic cancer of lung" is considered secondary. Select and code stomach cancer (C16.9) as the primary site.

(g) "Metastatic" neoplasm of a specific morphology
If the morphological type has a "preferred site" in ICD-O (see Rule H, section 5.6) and the site reported in the source documents indicates the same type of tissue, use the topography code provided as the primary site.

Example 10: Metastatic osteosarcoma of femur
Code to malignant neoplasm of long bones of lower limb (C40.2).

If the morphological type has a preferred site (Rule H of ICD-O) and the site reported indicates a *different* type of tissue, code to the unspecified site for the morphological type.

Example 11: Metastatic nephroblastoma of hilar lymph nodes
Code to unspecified site for kidney (C64.9).

5.7 CODING TNM AND STAGE

5.7.1 Coding of STAGE

ADULTS

CODE	UICC/AJCC STAGE	FIGO	Hodgkin Lymphoma
1x	Stage I	Stage I	Stage I
1A	Stage IA	Stage IA	Stage IA
1B	Stage IB	Stage IB	Stage IB
2x	Stage II	Stage II	Stage II
2A	Stage IIA	Stage IIA	Stage IIA
2B	Stage IIB	Stage IIB	Stage IIB
2C	Stage IIC		
3x	Stage III	Stage III	Stage III
3A	Stage IIIA	Stage IIIA	Stage IIIA
3B	Stage IIIB	Stage IIIB	Stage IIIB
3C	Stage IIIC	Stage IIIC	
4x	Stage IV	Stage IV	Stage IV
4A	Stage IVA	Stage IVA	Stage IVA
4B	Stage IVB	Stage IVB	Stage IVB

CHILDREN

<table>
<tr><th>CODE</th><th>STAGE</th><th colspan="2">CANCERS</th></tr>
<tr><td>C+</td><td>CNS+</td><td colspan="2" rowspan="2">Leukaemias</td></tr>
<tr><td>C-</td><td>CNS-</td></tr>
<tr><td>Lx</td><td>Localised</td><td rowspan="2">Soft tissue sarcomas
Wilms tumour (nephroblastoma)
Bone cancers (osteosarc.; Ewings T.) Neuroblastoma
Liver cancers
CNS/Brain cancers</td><td rowspan="3">Retinoblastoma
Testicular cancer
Ovarian cancer</td></tr>
<tr><td>Mx</td><td>Metastatic</td></tr>
<tr><td>Rx</td><td colspan="2">Regional</td></tr>
<tr><td>LR</td><td>Locoregional</td><td colspan="2" rowspan="2">Neuroblastoma</td></tr>
<tr><td>MS</td><td>Metastatic - limited</td></tr>
<tr><td>Lx</td><td>Limited</td><td colspan="2" rowspan="2">Non Hodgkin lymphoma,</td></tr>
<tr><td>Ax</td><td>Advanced</td></tr>
<tr><td>XX</td><td>Unknown</td><td colspan="2">ALL</td></tr>
</table>

5.7.2 Coding of TNM

- **When T, and/or N, and/or M ARE recorded in the clinical/pathological records, the cancer registrar should code the best available data (see 4.4.3).**

  However, if one or more of these elements are based on clinical evaluation (c TNM), and surgical/pathological information has become available at a later date, the registrar may record the appropriate Essential TNM code, if it differs from that in the record

- **When T, and/or N, and/or M have NOT been explicitly recorded in the clinical/pathological records, the cancer registrar should attempt to code extent of disease according to the Essential TNM scheme.**

  In the event of neoadjuvant therapy (i.e. systemic therapy prior to surgery) being given, information used for staging purposes should only include procedures and records prior to the initiation of this therapy.

Essential TNM is composed of three key elements that together summarize the extent of cancer in the patient. The elements are:

M: Presence or absence of distant metastasis
N: Presence or absence of regional node metastasis/involvement
T: Extent of invasion and/or size of the tumour

Coding the Elements of Essential TNM

The elements of Essential TNM are MNT in that order, and must be abstracted and entered into the database.

Metastasis (M)

M+ Presence of distant metastasis, clinically or pathologically
M- No mention of distant metastases, clinically or pathologically

- Distant metastasis (M) means that the original tumour (primary) has spread to distant organs or distant (non-regional) lymph nodes.
- M is based on the best available information, whether clinical, findings in surgery, images, or pathological.
- If pathological information is available to inform decisions regarding involvement by cancer, prefer that to clinical appraisal of the same tumour location.
- For coding M, clinical signs and findings are enough to justify metastasis (M+) in the absence of pathological confirmation of metastatic deposits.
- Do not code metastasis known to have developed after the diagnosis was established
- If no mention of metastases, record as M-.
- If distant metastasis can be established, there is no need to look further in the record for regional node involvement or tumour size/extension.

Regional Node Metastasis/Involvement (N)

R+ Presence of regional node metastasis/involvement, clinically or pathologically

R2 – Regional node metastasis is advanced
R1 – Regional node metastasis is limited

R- No mention of regional node metastases, clinically or pathologically

- Involvement of lymph nodes implies the tumour has spread via the lymphatic system and cancer cells are found in the lymph nodes that drain the specific organ.
- N is based on the most specific data available to confirm the presence or absence of regional node involvement and is generally coded from the pathology report. An “enlarged” or “palpable” node does not constitute involvement based on those words alone.
- N can be coded from the clinical record, typically from imaging or during surgical observation, in the absence of pathologic confirmation.
- The definition of 'regional nodes' is cancer site-specific, as can be seen in the Figures for each cancer
- Record as R+ in the presence of documented regional node involvement, R- otherwise.
- If more detailed information is available and it is relevant for a given cancer site, R+ can be further classified as R2, representing advance nodal involvement, or R1 representing limited nodal involvement.

Extent of Invasion and/or Size of Tumour (T)

A Extent of invasion and/or tumour size is Advanced
A2 - Extent of invasion and/or tumour size is very advanced
A1 - Extent of invasion and/or tumour size is advanced

L Extent of invasion and/or tumour size is Limited
L2 - Extent of invasion and/or tumour size is limited
L1 - Extent of invasion and/or tumour size is very limited

X Extent of invasion and/or tumour size cannot be assessed

- T is based on the most specific data available to confirm the extent of invasion within/through the involved organ and/or the size of the primary tumour (depending on the cancer site).
- It is generally coded from the pathology report and broadly classifies the extent as advanced or limited.
- T can be coded from the clinical record (endoscopy, x-rays, palpation, etc.) in the absence of pathologic confirmation.
- The definition of extent of invasion is cancer site-specific.
- Use the site-specific figures to help code the extent of invasion to the most specific category possible.

Absence of specific information on Metastases, Nodes, Tumour size/extent

- Code based on what you know from the record.
- For M and N, if there is no information on their presence, assume absent (M-, R-).
- If regional nodes are mentioned but you can't distinguish between advanced or limited metastasis for regional nodes, code R+.
- In a similar manner, if you can't distinguish degrees of tumour extension (2 versus 1) simply code T as A or L (depending on the cancer site, see flowcharts).
- Refer to the specific sites for assessing advanced or limited status.
- For T, X should be recorded if there is known to be a primary tumour, but there is no description of its size or extent.

Assigning the Essential TNM Stage Group

Once the Essential TNM elements have been coded, the elements can be combined into Stage groups ranging from I to IV with increasing severity of disease.

- Stage IV for cancers with distant metastasis.
- Stages III and II for cancers with increasing local and regional node involvement
- Stage I is typically assigned to cancers localised within the organ of origin
- The rules for combining the Essential TNM elements into Stage groups (I-IV) are provided on a site-specific basis.

Guidelines for abstraction from medical records

The following guidelines aim to help in abstracting information on stage from medical records.

- Quickly review the entire record for overall organization. Note the range of service dates, and the different facilities involved in the care of the patient.
- Identify definitive reports (operative, pathology, imaging), and note the dates and results on each report.
- Try to rule out metastatic distant disease first
- As metastasis are more frequent to bones, lungs or brain, it is practical to look in:
    - Imaging reports for any mention of distant metastasis. If metastasis is mentioned, remember to verify whether this was close to the time of diagnosis.
    - Operative reports/notes for any indication of liver metastasis, or tumour deposits indicating distant metastasis.
- Regional lymph nodes: Common expressions that imply spread to regional lymph nodes are lymph node metastasis and involvement of local lymph nodes.
- As illustrated in the flowcharts (Figures 1-4), the names of the regional lymph nodes are specific for each type of tumour, and must be checked against the clinical record. If the involved node is not in the regional list, consider it a distant node.

CODES FOR TNM

T			*N*			*M*	
code	***stage***		***code***	***stage***		***code***	***stage***
TX	*Tx*		*N0*	*N0*		*M0*	*M0*
T1	*T1*		*N1*	*N1*		*M1*	*M1*
T2	*T2*		*N2*	*N2*		*MX*	*MX*
T3	*T3*		*N3*	*N3*		*M+*	*M+*
T4	*T4*		*N4*	*N4*		*M-*	*M-*
Ax	*A*		*NX*	*Nx*			
Lx	*L*		*R+*	*R+*			
L1	*L1*		*R-*	*R-*			
L2	*L2*		*R1*	*R1*			
			R2	*R2*			

Table 5.3 Codes for TNM

Breast Cancer Essential TNM

Key points for breast cancer staging

1. Metastasis is common to the bone, lungs and brain. Look for evidence on imaging.
2. Remember that lymph nodes on the opposite (i.e. contralateral) side, or in the neck, are distant metastases (M+).
3. If M+, Stage IV can be assigned and no need to look for further information.
4. Look for tumour extension to breast skin.
5. Regional lymph nodes are axillary (includes intramammary), infraclavicular, internal mammary and supraclavicular on the same side as the tumour. (see pictures in the flowchart).
6. If lymph node involvement (R+) has been established but no further information is available on number of nodes and location, assume R+. In such an event, the case will be allotted to the lower stage category (following Rule 4 of TNM) e.g. to Stage II Regional Limited.
7. Size of the tumor is a critical aspect and a tumour smaller than 2 cm is "very limited" (Stage I).

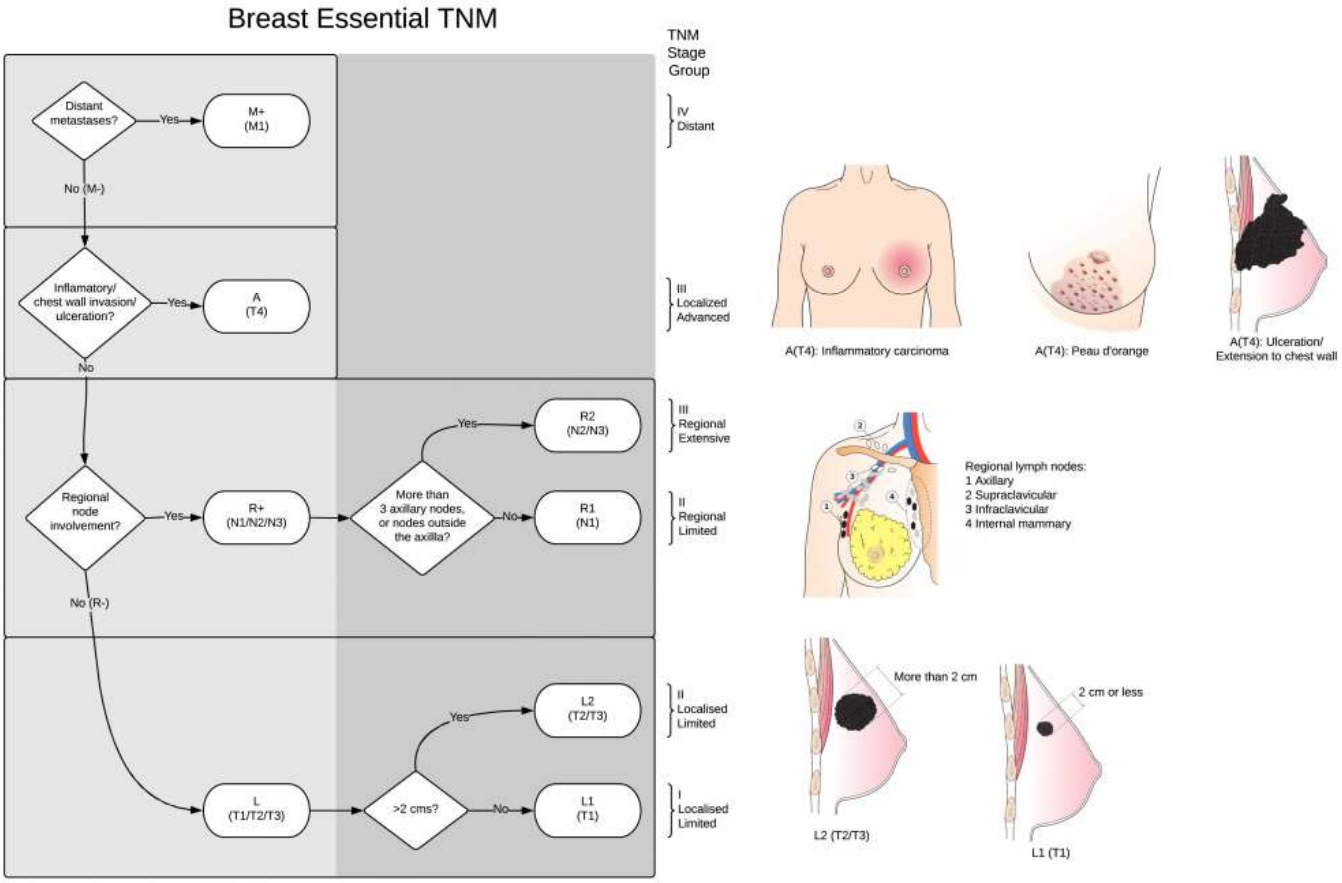

Fig 5.1 Breast cancer: coding by essential TNM

Cervix Cancer Essential TNM

Key points for cervical cancer staging

1. Metastasis is common to the bone, lungs and brain. Look for evidence on imaging.
2. Para aortic lymph nodes are distant (M+).
3. Invasion of the tumour into bladder, rectum or beyond pelvis is very advanced (A2) and considered Stage IV
4. Regional lymph nodes are those of the pelvis: paracervical, parametrial, hypogastric (internal iliac, obturator), common and external iliac, presacral, and lateral sacral nodes.
5. Most cervix cancers are staged using FIGO which does NOT consider regional lymph node involvement, but for which the codes for stage (I-IV) are otherwise identical.
6. Look for tumor extension to lower third of vagina, to the wall of the pelvis, or hydronephrosis due to ureter obstruction

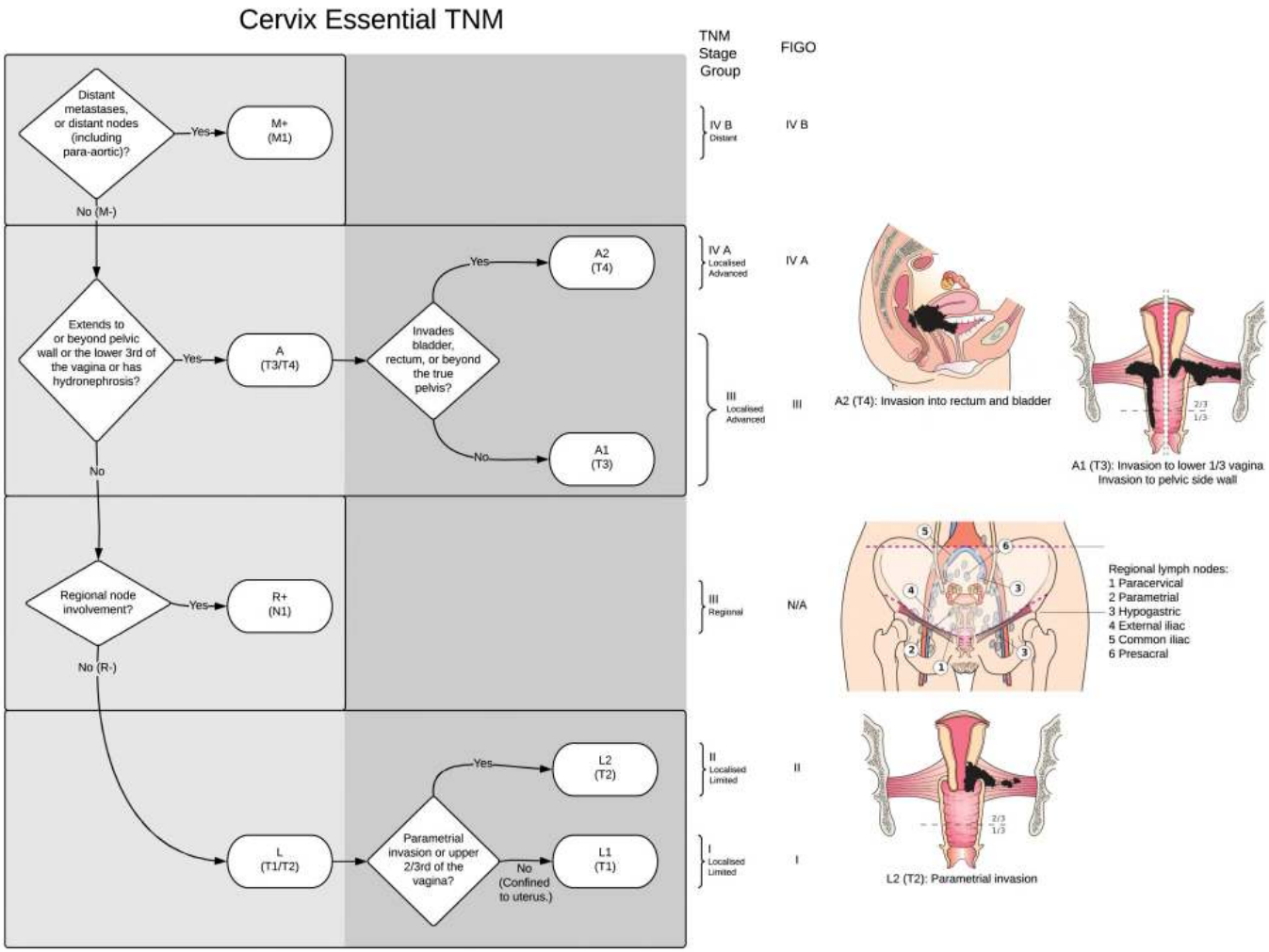

Fig 5.2 Cervix cancer: coding by essential TNM

Colorectal Cancer Essential TNM

Key points for colorectal cancer staging

1. Metastasis is common to the liver. This may be clinically documented in operative reports or on imaging.
2. Regional nodes are site-specific for each segment of the colon/rectum and are named accordingly (epicolic, mesenteric, paracolic, ileocolic, rectal).
3. Tumour deposits (satellites) are cancer nodules separate from the primary tumour, located in the same area as the regional lymph nodes (peri-colic/ peri-rectal tissues). It is assumed that they are really metastatic lesions of lymph nodes, and are coded R+
4. Look for extension through the wall of the colon/rectum
5. Tumour size is not important in assigning the stage

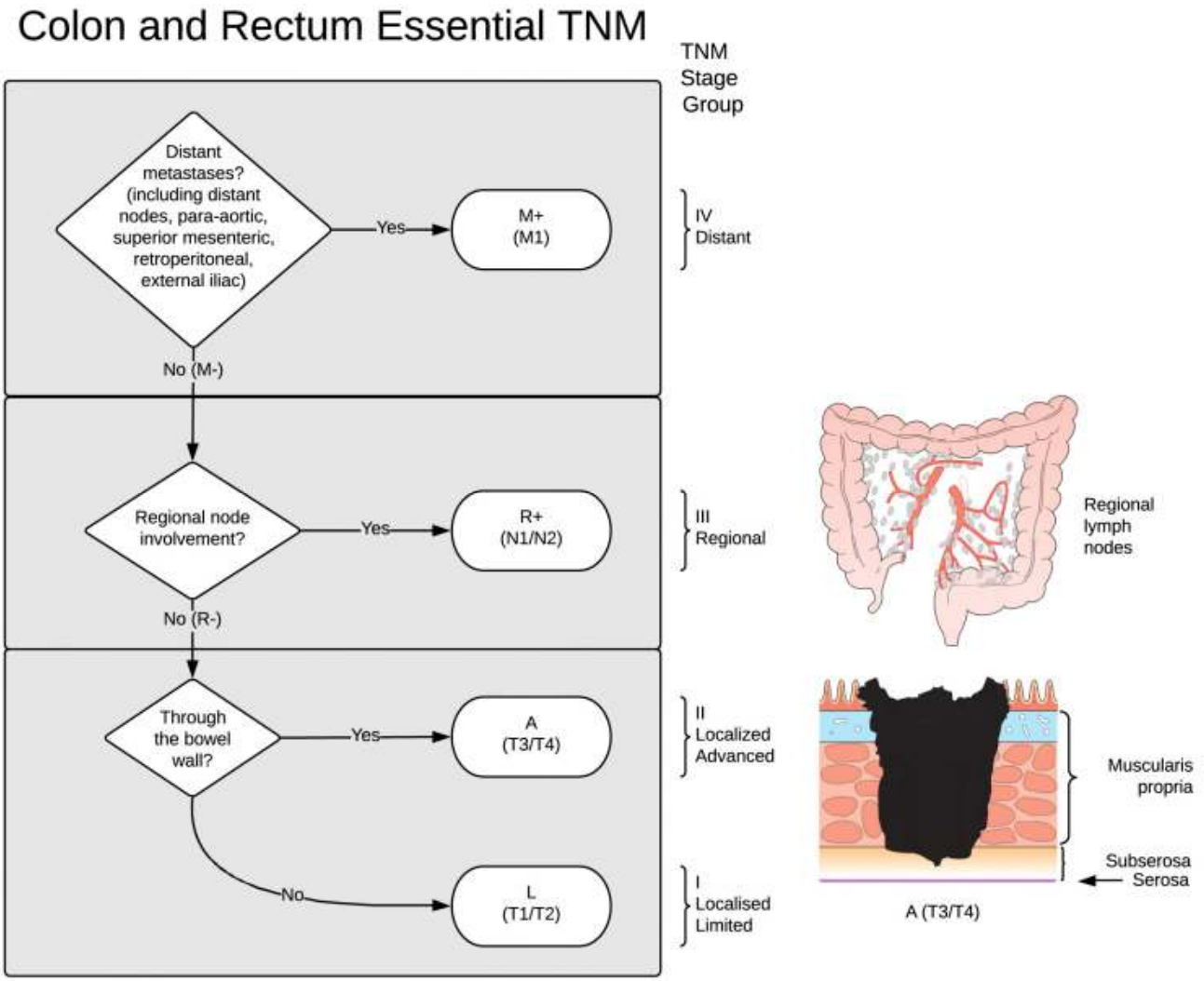

Fig 5.3 Colon-rectal cancer: coding by essential TNM

Organ	Segment	Regional lymph nodes
Colon	**Cecum**	Pericolic, ileocolic, right colic
	Ascending colon and hepatic flexure	Pericolic, ileocolic, right colic, middle colic
	Transverse colon and splenic flexure	Pericolic, middle colic, left colic
	Descending colon	Pericolic, left colic, sigmoid, inferior mesenteric
	Sigmoid and rectosigmoid	Pericolic, sigmoid, inferior mesenteric, superior rectal (hemorrhoidal)
Rectum	**Rectum**	Mescorectal, superior rectal (hemorrhoidal), inferior mesenteric, internal iliac, inferior rectal

Prostate Cancer Essential TNM

Key points for prostate cancer staging

1. Metastasis is most common to the bone. Look for evidence of this on imaging.
2. Remember that distant nodes beyond pelvis are M+; they include the following nodes: Aortic (paraaorticlumbar), common iliac, inguinal (femoral and deep), supraclavicular, cervical, scalene and retroperitoneal
3. Regional nodes are those of the true pelvis (the pelvic nodes below the bifurcation of the common iliac arteries: obturator, periprostatic, perivesical, pelvic, iliac, sacral, hypogastric).
4. Look for tumor extension beyond the prostate capsule; if it is confined to the prostate, the tumour is Localised (L).

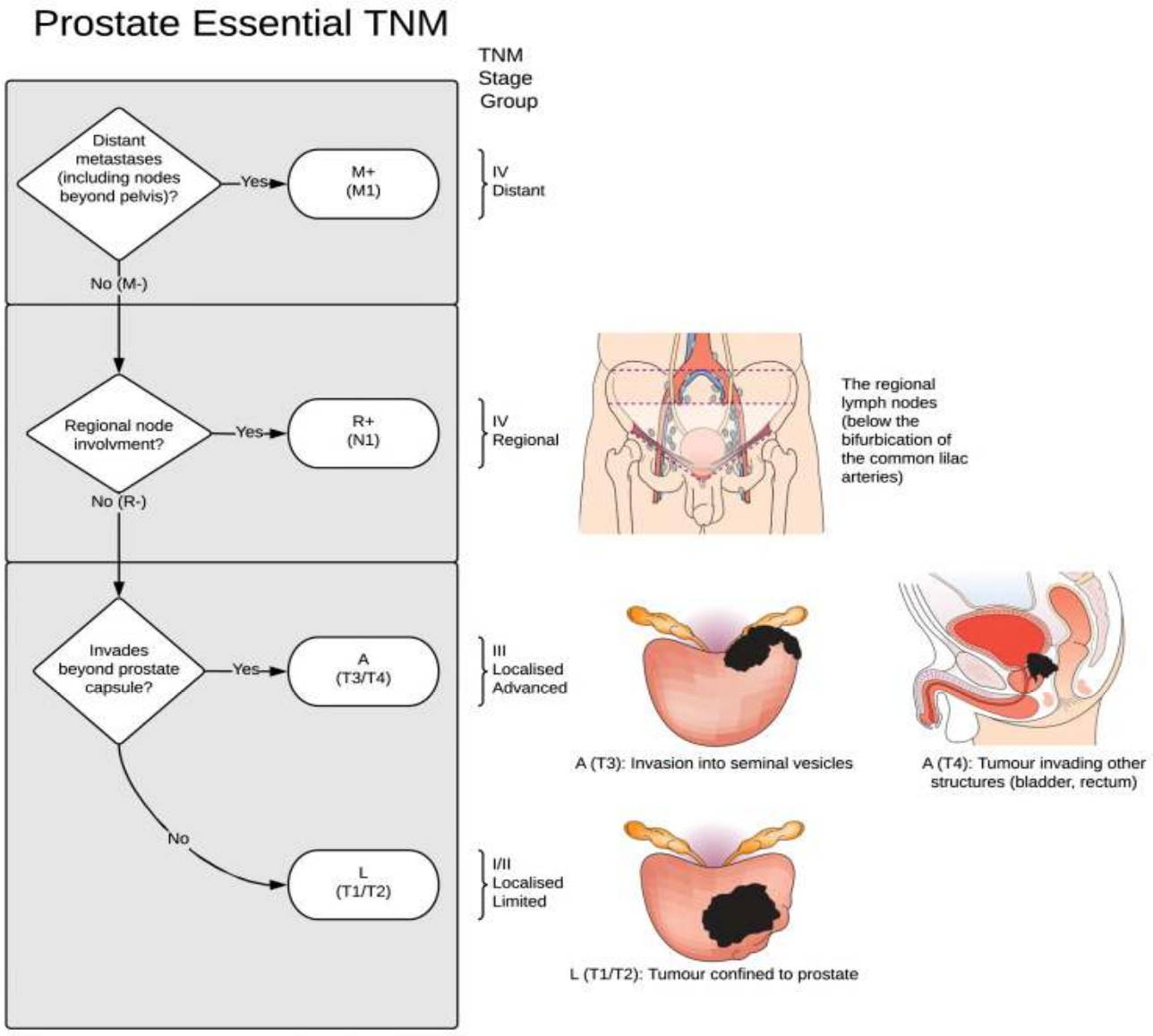

Fig 5.4 Prostrate Cancer: coding by essential TNM

5.8 SOURCE OF INFORMATION

[Example – Gulu cancer registry (Uganda]]

Source of information	
Lacor Hospital	10
Gulu Regional Hospital	30
Gulu Military Hospital	50
Gulu Independent Hospital	51
Anaka	52
Uganda Cancer Institute	80
Mulago Hospital	81
Nsambya Hospital	82
Rubaga Hospital	83
Mengo Hospital	84
TASO Gulu	85
Gulu Private Clinics	86
The Media	87
Community Gatherings	88
Laboratories	
Lacor Pathology Gulu	10
Lab-Makerere	80
Lab-MultiSystem	81
Lab-Metromed	82
Lab-Nsambya	83

Appendix 4a: Codes used for units in the health facilities as cancer data sources

Sources Units (Wards)	Medical	Surgical	Gynaecology	Paediatrics	OPD	Mortuary
Lacor Hospital (Code 10)	101	102	103	104	106	105
Gulu Regional Hospital (Code 30)	301	302	303	304	306	305
Gulu Military Hospital (Code 50)	501	502	503	504	506	505
Gulu Independent Hospital(Code 51)	511	512	513	514	516	515
Anaka Hospital (Code 52)	521	522	523	524	526	525