



# GULU CANCER REGISTRY

Improving the health status of the people of Northern Uganda through cancer notification to create interventional programs aimed at mitigating cancer burden in the region for economic development.

## STANDARD OPERATING PROCEDURES

### Case Finding, Data Abstraction, Consolidation, Coding and Entry

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## List of Acronyms

<b>UNAIDS</b>	: United Nations programs on AIDS
<b>UBOS</b>	: Uganda Bureau of Statistics
<b>GCR</b>	: Gulu Cancer Registry
<b>ICD-O</b>	: International Classification of Diseases for Oncology
<b>EUA</b>	: Examination under Anaesthesia
<b>FNAB</b>	: Fine Needle Aspiration Biopsy
<b>UN</b>	: United Nations
<b>GOPD</b>	: Gynaecology Out Patient Department
<b>SOPD</b>	: Surgical Out Patient Department
<b>AFCRN</b>	: African Cancer Registry Network
<b>EACRN</b>	: East African Cancer Registry Network
<b>CT</b>	: Computed Topography
<b>MRI</b>	: Magnetic Resonance Imaging
<b>NOS</b>	: Not Otherwise Specified
<b>KCR</b>	: Kampala Cancer Registry

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## **1.0 Introduction**

Gulu cancer registry (GCR) is a population based cancer registry that became operational in June 2014. It is located at St. Mary's Hospital Lacor, about 7 Km west of Gulu town in Northern part of Uganda. It serves the districts of Gulu, Nwoya and Amuru with a total population of 629,300 people [M= 310,900 F= 318,400] (UBOS, 2012 population projection). The registry collects cancer data from the health facilities and medical centres within the three districts. It uses CanReg 5 system version 5.00.32build1469 for data entry, cleaning and analysis.

### **1.1 Mission**

The mission of Gulu Cancer Registry is to keep accurate and up to date information on the occurrences of common malignancies in the districts of Gulu, Amuru and Nwoya. This enables quality studies on cancers through research activities and planning cancer control programs aimed at mitigating cancer disease burdens in the community.

### **1.2 Vision**

To improve the health status of the people of Northern Uganda through cancer notification in order to create interventional programs aimed at mitigating cancer burden in the region for economic development.

### **1.3 Core Values**

- Data collection accuracy.
- Information Completeness.
- Quality Data.
- Pro-activeness.
- Work Collaboration.
- Confidentiality of information.

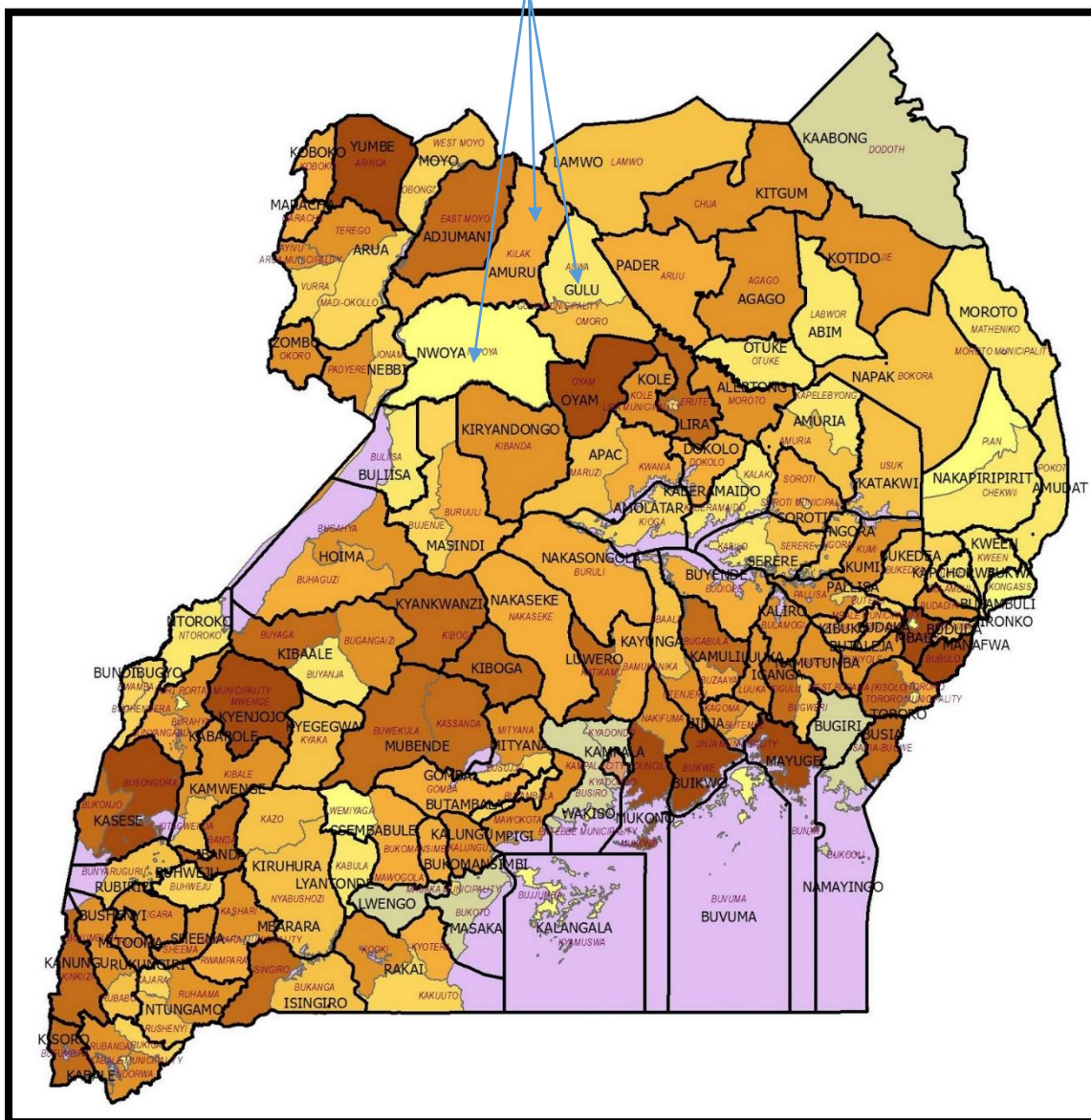
## **2.0 Background**

The registry catchment area has been the center of 20 years civil war which displaced over 90% of the people into the internally displaced camps (UN, 2004). The displaced persons were surviving on food handouts by the World Food Program and living in extreme poverty with poor living conditions and poor access to health services. Despite current normalization of the security situation, the post conflict impact on the health of the people is visible. Redundancy at the internally displaced camps resulted into change of lifestyle. Cancer is now the second leading proportional mortality in Lacor (Accorsi et al., 2005). Poor health seeking behaviour, Poverty and illiteracy are some of the risk factors which increase the burden of cancers Northern Uganda. The region has the highest prevalence of HIV/AIDS standing at 9.2% compared to 7.2% national average (UNAIDS, 2012). This trend is consistent with the study by Fabiani et al. (2005) where they found that HIV-1 prevalence in this rural district of Northern Uganda is high, probably reflecting the effect of the last 18 years of civil strife. There is association between HIV and malignancies such as invasive cervical cancer, Kaposi's sarcoma, Breast cancer. Cervical cancer, Kaposi's sarcoma, Hepatocellular carcinoma, Burkitts' lymphoma incidence in Uganda per 100,000 population stands at about 30%, 10%, 8% respectively (Parkin et al. 2009). However little is known about all the other cancers and their impact on the community of Northern Uganda. Given the above background, operationalizing Gulu Cancer Registry ensures continuous and systematic cancer data collection and analysis to guide policy on cancer in the region. Consequently, cancer prevention and control programs aimed at reducing the cancer burden can be instituted for better health of the community members of Gulu, Amuru and Nwoya Districts and beyond.

### 3.0 Catchment Population and Geographical Area

Gulu Cancer Registry operates in the districts of Amuru, Gulu and Nwoya with a total population of 629, 300 inhabitants. It covers an area 567,800 Km in total and on average the three districts has a population density of 80 people per square kilometers (UBOS, 2009).

**Figure 1: Map of Uganda showing the location of Amuru, Nwoya and Gulu Districts**





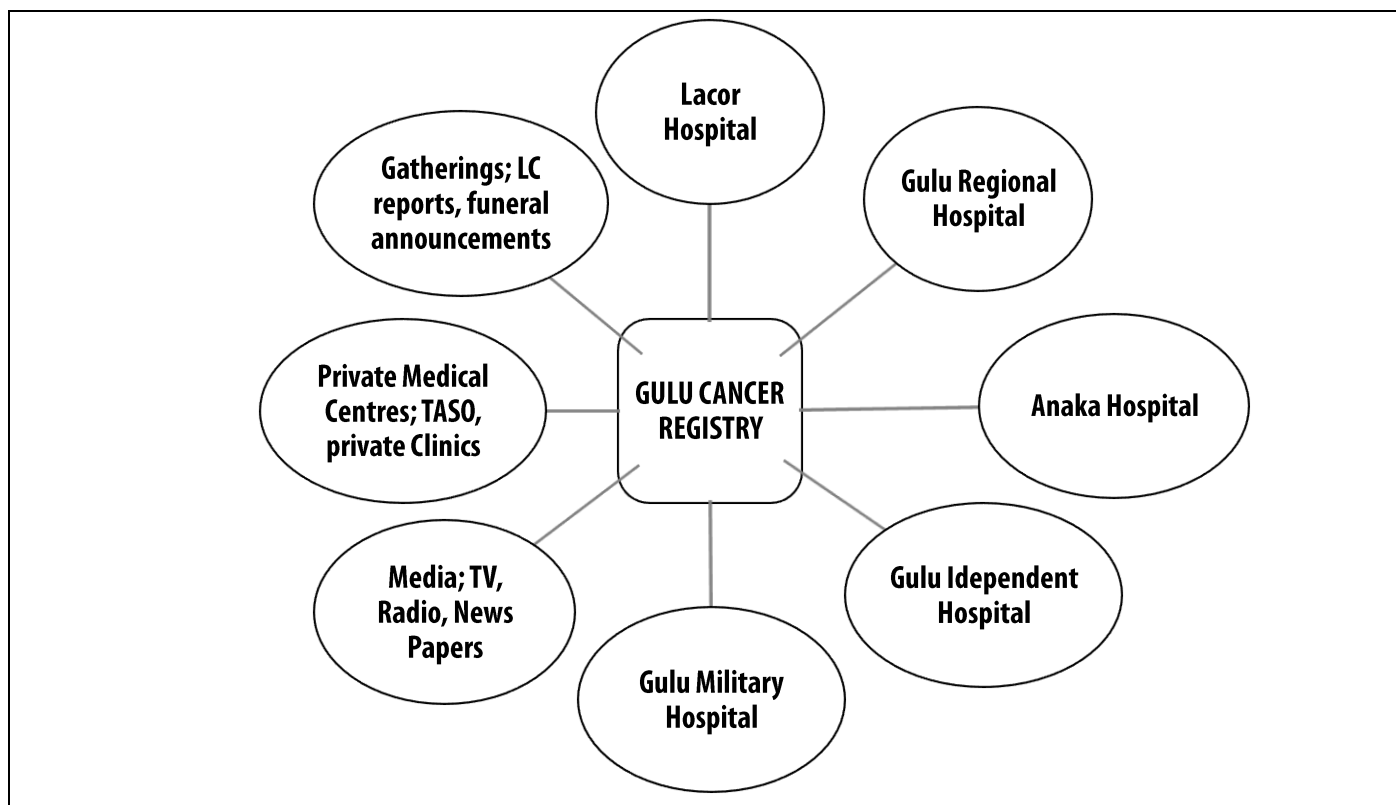


## **4.0 Cancer Data Collection and Entry**

### **4.1 Case Finding**

The case finding strategy of GCR involves identifying individuals living with or deceased from cancers. The data sources includes the following health facilities; Lacor Hospital, Gulu Independent Hospital, Gulu Regional Referral Hospital, Gulu Military Hospital, Anaka Hospital. Out Patients Clinics such as TASO Gulu and other private clinics/medical centres are data sources for the registry. Other sources of data also include the media; National and Local Television news or programs on Non-communicable diseases like cancer. The print media (Newspapers) and local radio announcements on cancer illness and deaths also forms part of the data source. Community gathering reports namely Local leaders meetings and announcements, funeral rites announcement at burials sites and places of worship about cancer being cause of death also forms the source of data for the registry.

**Figure 3: Chart showing the data sources for Gulu Cancer Registry**



**Hospital/Clinic Sites for source of cancer data**

1. Medical procedures reports; Endoscopy, Colposcopy, Colonoscopy, EUA, FNAB records.  
OPD attendance records; General Attendance Register, Special Clinics (SOPD, GOPD) registers.
2. In patient records; Clinical Charts, Admission and Discharge books.
3. Electronic and hard copies medical records Archives.
4. Imaging Diagnostic records; X-Ray, Ultrasound, CT scan, MRI records.
5. Radiotherapy referral records.
6. Autopsy reports.
7. Histology reports
8. Treatment logs; In-patient Medication sheets, chemotherapy logs in the pharmacy.
9. Laboratory findings; Hematology reports.

10. Death Certificates.

11. Mortuary records

12. Patients' Medical form 5 (MF5) information.

#### 4.2 Data Abstraction

This process involves recording information from the patient's and or deceased medical records into the cancer notification form (see appendix 8). The abstraction is on patients' bio-data, tumour, treatment, source of information and follow up. Only patients with malignant tumour (Behaviour 3, ICD-O-3) except for neurological tumours and residing within the catchment area (Gulu, Amuru and Nwoya Districts) are considered for data abstraction.

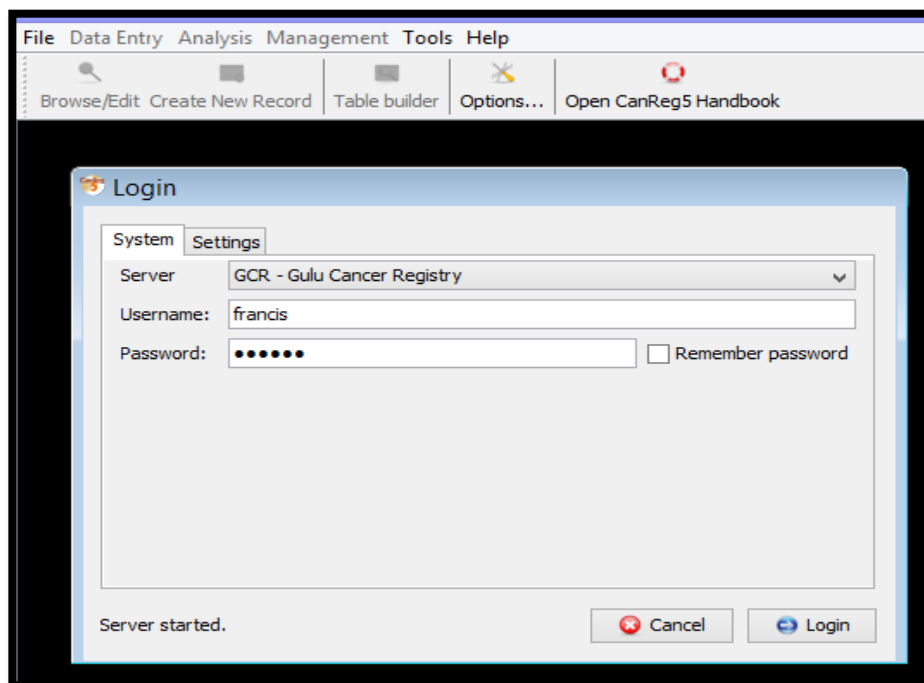
#### 4.3 Case Consolidation

This process involves updating and reconciling information on each tumour, patient bio-data, treatment and follow up. Periodically, follow back is conducted by pursuing leads from secondary sources. Both active and passive follow up is conducted to determined patients status for update.

#### 4.4 Data entry, cleaning and analysis

Gulu Cancer Registry uses CanReg5 system to enter, clean and analyzed data on cancer cases. The database is installed and run from an internet server for purpose of data back in the cloud

server. The accounts is accessible by namely; Supervisor, Registrars and Analyst all of whom have different level of rights to accessing the features and



functionality of the CanReg5 system (See Figure 4). The data cleaning process is run periodically using the inbuilt tool to weed out duplicate entry and missing information.

Figure 4: CanReg5 System Used by Gulu Cancer Registry

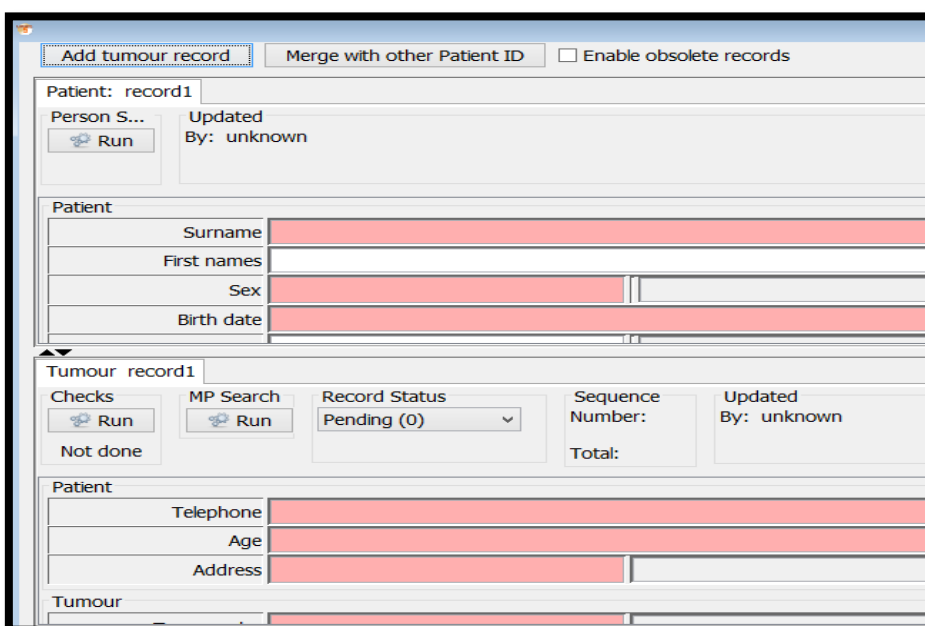
#### 4.4.0 Coding

Gulu Cancer Registry assigns codes to each variable in the cancer notification form. The variables are; patient bio-data, tumour, source, treatment and patient’s status. Coding tumours follow ICD-O-3 rules for morphology and topography of the tumour(s) in question. Other local codes used especially for addresses and data source facilities are as discussed and approved by Gulu Cancer Registry and or other registry networks nationally and globally.

#### Cancer Data Quality Control

***To ensure good quality of data collected, the following criteria for cancer data exclusion/inclusion shall be adhered to by Gulu Cancer Registry;***

- Only cancer patients (alive or dead) residing in Amuru, Nwoya and Gulu Districts for the last 12 months qualifies for entry into the registry.



- Population of the catchment area is that used by Uganda Bureau of Statistics (UBOS, 2012 projection) awaiting update with the national census due for August 2014.

- The population data set of the catchment area is distributed into 5 years groups by sex as 0-4, 5-9, 10-14.....75+.
- Only patients living with or deceased from malignant tumour are entered into the cancer registry. Clinically diagnosed malignancies are considered for entry into the cancer registry. Patients with benign lesions, tumours with uncertain behaviour, in situ, metastatic with unknown primary are excluded. However, all neurological tumours; benign or malignant are entered into the cancer registry.
- Periodic re-review of sample of case finding reports, re-abstraction is done. Active updates by the registry staff, data quality audit by external registry expert (KCR, AFRCN, and EACRN) is also conducted.
- Missing records from one source but available in another with pursuable leads are included in the registry data after update.
- Duplicate entry is checked manually and electronically using CanReg5 tools (MP Search) for data cleaning.
- Missing data with leads to primary data source not pursuable are omitted from entry into the cancer registry.
- Data available from multiple sources but not the same is entered into the registry only after reconciliation. If lead is not pursuable, data is deleted from Gulu Cancer Registry.
- Clinicians are encouraged to biopsy all tumours suspected to be malignant for histological examination to be performed. This increase the MV% of Gulu Cancer Registry.
- Death Certificates are updated with substantive information about the patient's malignancy medical records to reduce on the DCO%.

## List of Appendices

### Topography

00	LIP	49	SOFT TISSUES
01	TONGUE - BASE	50	BREAST
02	TONGUE - OTHER	51	VULVA
03	GUM	52	VAGINA
04	MOUTH - FLOOR	53	CERVIX UTERI
05	MOUTH - PALATE	54	CORPUS UTERI
06	MOUTH - OTHER	55	UTERUS, NOS
07	MOUTH - PAROTID	56	OVARY
08	MOUTH - GLANDS	57	FEMALE GEN.- OTHER
09	TONSILS	58	PLACENTA
10	OROPHARYNX	60	PENIS
11	NASOPHARYNX	61	PROSTATE
12	PYRIFORM SINUS	62	TESTIS
13	HYPOPHARYNX	63	MALE GEN.- OTHER
14	OTHER PHARYNX	64	KIDNEY
15	ESOPHAGUS	65	RENAL PELVIS
16	STOMACH	66	URETER
17	SMALL INTESTINE	67	BLADDER
18	COLON	68	URETHRA, OTHER
19	RECTOSIGMOID JTN	69	EYE
20	RECTUM	70	MENINGES
21	ANUS, ANAL CANAL	71	BRAIN
22	LIVER	72	NERVOUS SYSTEM
23	GALL BLADDER	73	THYROID
24	BILE TRACT	74	ADRENAL GLAND
25	PANCREAS	75	ENDOCRINE GLANDS
26	GASTROINTESTINAL	76	ILL-DEFINED
30	EAR/NOSE	77	LYMPH NODES
31	ACCESSORY SINUSES	80	UNKNOWN
32	LARYNX		
33	TRACHEA		
34	BRONCHUS, LUNG		
37	THYMUS		
38	HEART, PLEURA		
39	RESPIRATORY TRACT		
40	BONES - LIMBS		
41	BONES - OTHER		
42	BLOOD, SPLEEN		
44	SKIN		
47	PERIPHERAL NERVES		
48	PERITONEUM		

## Morphology Codes

000	C00.0	External upper lip	088	C08.8	Overl. lesion of major salivary gland
001	C00.1	External lower lip	089	C08.9	Major salivary gland, NOS
002	C00.2	External lip, NOS	090	C09.0	Tonsillar fossa
003	C00.3	Mucosa of upper lip	091	C09.1	Tonsillar pillar
004	C00.4	Mucosa of lower lip	098	C09.8	Overl. lesion of tonsil
005	C00.5	Mucosa of lip, NOS	099	C09.9	Tonsil, NOS
006	C00.6	Commissure of lip	100	C10.0	Vallecula
008	C00.8	Overl. lesion of lip	101	C10.1	Anterior surface of epiglottis
009	C00.9	Lip, NOS	102	C10.2	Lateral wall of oropharynx
019	C01.9	Base of tongue, NOS	103	C10.3	Posterior wall of oropharynx
020	C02.0	Dorsal surface of tongue, NOS	104	C10.4	Branchial cleft
021	C02.1	Border of tongue	108	C10.8	Overl. lesion of oropharynx
022	C02.2	Ventral surface of tongue, NOS	109	C10.9	Oropharynx, NOS
023	C02.3	Anterior 2/3 of tongue, NOS	110	C11.0	Superior wall of nasopharynx
024	C02.4	Lingual tonsil	111	C11.1	Posterior wall of nasopharynx
028	C02.8	Overl. lesion of tongue	112	C11.2	Lateral wall of nasopharynx
029	C02.9	Tongue, NOS	113	C11.3	Anterior wall of nasopharynx
030	C03.0	Upper gum	118	C11.8	Overl. lesion of nasopharynx
031	C03.1	Lower gum	119	C11.9	Nasopharynx, NOS
039	C03.9	Gum, NOS	129	C12.9	Pyramidal sinus
040	C04.0	Anterior floor of mouth	130	C13.0	Postcricoid region
041	C04.1	Lateral floor of mouth	131	C13.1	Aryepiglottic fold
048	C04.8	Overl. lesion of floor of mouth	132	C13.2	Posterior wall of hypopharynx
049	C04.9	Floor of mouth, NOS	138	C13.8	Overl. lesion of hypopharynx
050	C05.0	Hard palate	139	C13.9	Hypopharynx, NOS
051	C05.1	Soft palate, NOS	140	C14.0	Pharynx, NOS
052	C05.2	Uvula	141	C14.1	Laryngopharynx
058	C05.8	Overl. lesion of palate	142	C14.2	Waldeyer's ring, NOS
059	C05.9	Palate, NOS	148	C14.8	Overl. lesion of lip, oral cavity, pharynx
060	C06.0	Cheek mucosa	150	C15.0	Cervical esophagus
061	C06.1	Vestibule of mouth			
062	C06.2	Retromolar area			
068	C06.8	Overl. lesion of other/unspec. parts of mouth			
069	C06.9	Mouth, NOS			
079	C07.9	Parotid gland			
080	C08.0	Submandibular gland			
081	C08.1	Sublingual gland			

151 C15.1 Thoracic esophagus  
 152 C15.2 Abdominal esophagus  
 153 C15.3 Upper third of  
 esophagus  
 154 C15.4 Middle third of  
 esophagus  
 155 C15.5 Lower third of  
 esophagus  
 158 C15.8 Overl. lesion of  
 esophagus  
 159 C15.9 Oesophagus, NOS  
 160 C16.0 Cardia, NOS  
 161 C16.1 Fundus of stomach  
 162 C16.2 Body of stomach  
 163 C16.3 Gastric antrum  
 164 C16.4 Pylorus  
 165 C16.5 Lesser curvature of  
 stomach, NOS  
 166 C16.6 Greater curvature of  
 stomach, NOS  
 168 C16.8 Overl. lesion of stomach  
 169 C16.9 Stomach, NOS  
 170 C17.0 Duodenum  
 171 C17.1 Jejunum  
 172 C17.2 Ileum  
 173 C17.3 Meckel's diverticulum  
 178 C17.8 Overl. lesion of small  
 intestine  
 179 C17.9 Small intestine  
 180 C18.0 Cecum  
 181 C18.1 Appendix  
 182 C18.2 Ascending colon  
 183 C18.3 Hepatic flexure of colon  
 184 C18.4 Transverse colon  
 185 C18.5 Splenic flexure of colon  
 186 C18.6 Descending colon  
 187 C18.7 Sigmoid colon  
 188 C18.8 Overl. lesion of colon  
 189 C18.9 Colon, NOS  
 199 C19.9 Rectosigmoid junction  
 209 C20.9 Rectum, NOS  
 210 C21.0 Anus, NOS  
 211 C21.1 Anal canal  
 212 C21.2 Cloacogenic zone  
 218 C21.8 Overlap rectum, anus,  
 anal canal  
 220 C22.0 Liver  
 221 C22.1 Intrahepatic bile duct  
 239 C23.9 Gallbladder  
 240 C24.0 Extrahepatic bile duct  
 241 C24.1 Ampulla of Vater  
 248 C24.8 Overl. lesion of biliary  
 tract  
 249 C24.9 Biliary tract, NOS  
 250 C25.0 Head of pancreas  
 251 C25.1 Body of pancreas  
 252 C25.2 Tail of pancreas  
 253 C25.3 Pancreatic duct  
 254 C25.4 Islets of Langerhans  
 257 C25.7 Other specified parts of  
 pancreas  
 258 C25.8 Overl. lesion of pancreas  
 259 C25.9 Pancreas, NOS  
 260 C26.0 Intestinal tract, NOS  
 268 C26.8 Overl. lesion of digestive  
 system  
 269 C26.9 Gastrointestinal tract,  
 NOS  
 300 C30.0 Nasal cavity  
 301 C30.1 Middle ear  
 310 C31.0 Maxillary sinus  
 311 C31.1 Ethmoid sinus  
 312 C31.2 Frontal sinus  
 313 C31.3 Sphenoid sinus  
 318 C31.8 Overl. lesion of  
 accessory sinuses  
 319 C31.9 Accessory sinus, NOS  
 320 C32.0 Glottis  
 321 C32.1 Supraglottis  
 322 C32.2 Subglottis  
 323 C32.3 Laryngeal cartilage  
 328 C32.8 Overl. lesion of larynx  
 329 C32.9 Larynx, NOS  
 339 C33.9 Trachea  
 340 C34.0 Main bronchus  
 341 C34.1 Upper lobe, lung  
 342 C34.2 Middle lobe, lung  
 343 C34.3 Lower lobe, lung



348 C34.8 Overl. lesion of lung  
 349 C34.9 Lung, NOS  
 379 C37.9 Thymus  
 380 C38.0 Heart  
 381 C38.1 Anterior mediastinum  
 382 C38.2 Posterior mediastinum  
 383 C38.3 Mediastinum, NOS  
 384 C38.4 Pleura, NOS  
 388 C38.8 Overl. lesion of heart, mediastinum, pleura  
 390 C39.0 Upper respiratory tract  
 398 C39.8 Overl. lesion of respiratory system  
 399 C39.9 Ill-defined sites within respiratory system  
 400 C40.0 Long bones of upper limb, scapula  
 401 C40.1 Short bones of upper limb  
 402 C40.2 Long bones of lower limb  
 403 C40.3 Short bones of lower limb  
 408 C40.8 Overl. lesion of bones of limb  
 409 C40.9 Bone of limb, NOS  
 410 C41.0 Bones of skull and face  
 411 C41.1 Mandible  
 412 C41.2 Vertebral column  
 413 C41.3 Rib, Sternum, Clavicle  
 414 C41.4 Pelvic bones, Sacrum, Coccyx  
 418 C41.8 Overl. lesion of bones  
 419 C41.9 Bone, NOS  
 420 C42.0 Blood  
 421 C42.1 Bone marrow  
 422 C42.2 Spleen  
 423 C42.3 Reticuloendothelial system, NOS  
 424 C42.4 Hematopoietic system, NOS  
 440 C44.0 Skin of lip, NOS  
 441 C44.1 Eyelid  
 442 C44.2 External ear  
 443 C44.3 Skin, other & unspec parts of face  
 444 C44.4 Skin of scalp and neck  
 445 C44.5 Skin of trunk  
 446 C44.6 Skin of upper limb and shoulder  
 447 C44.7 Skin of lower limb and hip  
 448 C44.8 Overl. lesion of skin  
 449 C44.9 Skin, NOS  
 470 C47.0 Per. nerves & A.N.S. of head, face, neck  
 471 C47.1 Per. nerves & A.N.S. of upper limb, shoulder  
 472 C47.2 Per. nerves & A.N.S. of lower limb, hip  
 473 C47.3 Per. nerves & A.N.S. of thorax  
 474 C47.4 Per. nerves & A.N.S. of abdomen  
 475 C47.5 Per. nerves & A.N.S. of pelvis  
 476 C47.6 Per. nerves & A.N.S. of trunk  
 478 C47.8 Overl. lesion of peripheral nerves & ANS  
 479 C47.9 Autonomic nervous system, NOS  
 480 C48.0 Retroperitoneum  
 481 C48.1 Specified parts of peritoneum  
 482 C48.2 Peritoneum, NOS  
 488 C48.8 Overl. lesion of retroperitoneum & peritoneum  
 490 C49.0 Soft tissues of head, face, & neck  
 491 C49.1 Soft tissues of upper limb, shoulder  
 492 C49.2 Soft tissues of lower limb and hip  
 493 C49.3 Soft tissues of thorax  
 494 C49.4 Soft tissues of abdomen  
 495 C49.5 Soft tissues of pelvis  
 496 C49.6 Soft tissues of trunk

498 C49.8 Overl. lesion of soft tissues

499 C49.9 Other soft tissues

500 C50.0 Nipple

501 C50.1 Central portion of breast

502 C50.2 Upper-inner quadrant of breast

503 C50.3 Lower-inner quadrant of breast

504 C50.4 Upper-outer quadrant of breast

505 C50.5 Lower-outer quadrant of breast

506 C50.6 Axillary tail of breast

508 C50.8 Overl. lesion of breast

509 C50.9 Breast, NOS

510 C51.0 Labium majors

511 C51.1 Labium minor

512 C51.2 Clitoris

518 C51.8 Overl. lesion of vulva

519 C51.9 Vulva, NOS

529 C52.9 Vagina, NOS

530 C53.0 Endocervix

531 C53.1 Exocervix

538 C53.8 Overl. lesion of cervix uteri

539 C53.9 Cervix uteri

540 C54.0 Isthmus uteri

541 C54.1 Endometrium

542 C54.2 Myometrium

543 C54.3 Fundus uteri

548 C54.8 Overl. lesion of corpus uteri

549 C54.9 Corpus uteri

559 C55.9 Uterus, NOS

569 C56.9 Ovary

570 C57.0 Fallopian tube

571 C57.1 Broad ligament

572 C57.2 Round ligament

573 C57.3 Parametrium

574 C57.4 Uterine adnexa

577 C57.7 Other parts of female genital organs

578 C57.8 Overl. lesion of female genital organs

579 C57.9 Female genital tract, NOS

589 C58.9 Placenta

600 C60.0 Prepuce

601 C60.1 Glans penis

602 C60.2 Body of penis

608 C60.8 Overl. lesion of penis

609 C60.9 Penis, NOS

619 C61.9 Prostate gland

620 C62.0 Undescended testis

621 C62.1 Descended testis

629 C62.9 Testis, NOS

630 C63.0 Epididymis

631 C63.1 Spermatic cord

632 C63.2 Scrotum, NOS

637 C63.7 Other parts of male genital organs

638 C63.8 Overl. lesion of male genital organs

639 C63.9 Male genital organs, NOS

649 C64.9 Kidney, NOS

659 C65.9 Renal pelvis

669 C66.9 Ureter

670 C67.0 Trigone of urinary bladder

671 C67.1 Dome of urinary bladder

672 C67.2 Lateral wall of urinary bladder

673 C67.3 Anterior wall of urinary bladder

674 C67.4 Posterior wall of urinary bladder

675 C67.5 Bladder neck

676 C67.6 Ureteric orifice

677 C67.7 Urachus

678 C67.8 Overl. lesion of bladder

679 C67.9 Urinary bladder, NOS

680 C68.0 Urethra

681 C68.1 Paraurethral gland

688 C68.8 Overl. lesion of urinary organs

689 C68.9 Urinary system, NOS  
 690 C69.0 Conjunctiva  
 691 C69.1 Cornea, NOS  
 692 C69.2 Retina  
 693 C69.3 Choroid  
 694 C69.4 Ciliary body  
 695 C69.5 Lacrimal gland, NOS  
 696 C69.6 Orbit, NOS  
 698 C69.8 Overl. lesion of eye, adnexa  
 699 C69.9 Eye, NOS  
 700 C70.0 Cerebral meninges  
 701 C70.1 Spinal meninges  
 709 C70.9 Meninges, NOS  
 710 C71.0 Cerebrum  
 711 C71.1 Frontal lobe  
 712 C71.2 Temporal lobe  
 713 C71.3 Parietal lobe  
 714 C71.4 Occipital lobe  
 715 C71.5 Ventricle, NOS  
 716 C71.6 Cerebellum, NOS  
 717 C71.7 Brain stem  
 718 C71.8 Overl. lesion of brain  
 719 C71.9 Brain, NOS  
 720 C72.0 Spinal cord  
 721 C72.1 Cauda equina  
 722 C72.2 Olfactory nerve  
 723 C72.3 Optic nerve  
 724 C72.4 Acoustic nerve  
 725 C72.5 Cranial nerve  
 728 C72.8 Overl. lesion of brain and CNS  
 729 C72.9 Nervous system, NOS  
 739 C73.9 Thyroid gland  
 740 C74.0 Cortex of adrenal gland  
 741 C74.1 Medulla of adrenal gland  
 749 C74.9 Adrenal gland, NOS  
 750 C75.0 Parathyroid gland  
 751 C75.1 Pituitary gland  
 752 C75.2 Craniopharyngeal duct  
 753 C75.3 Pineal gland  
 754 C75.4 Carotid body  
 755 C75.5 Aortic body and other paraganglia  
 758 C75.8 Overl. lesion of endocrine glands  
 759 C75.9 Endocrine gland, NOS  
 760 C76.0 Head, face or neck, NOS  
 761 C76.1 Thorax, NOS  
 762 C76.2 Abdomen, NOS  
 763 C76.3 Pelvis, NOS  
 764 C76.4 Upper limb, NOS  
 765 C76.5 Lower limb, NOS  
 767 C76.7 Other ill-defined sites  
 768 C76.8 Overl. lesion of ill-defined sites  
 770 C77.0 Lymph nodes of head, face and neck  
 771 C77.1 Intrathoracic lymph nodes  
 772 C77.2 Intra-abdominal lymph nodes  
 773 C77.3 Lymph nodes of axilla or arm  
 774 C77.4 Lymph nodes, inguinal region or leg  
 775 C77.5 Pelvic lymph nodes  
 778 C77.8 Lymph nodes of multiple regions  
 779 C77.9 Lymph node, NOS  
 809 C80.9 Unknown primary site

## Morphology Codes

- 8000 Neoplasm, malignant
- 8001 Tumor cells, malignant
- 8002 Malignant tumor, small cell type
- 8003 Malignant tumor, giant cell type
- 8004 Malignant tumor, spindle cell type
- 8005 Malignant tumor, clear cell type
- 8010 Carcinoma, NOS
- 8011 Epithelioma, malignant
- 8012 Large cell carcinoma, NOS
- 8013 Large cell neuroendocrine carcinoma
- 8014 Large cell carcinoma with rhabdoid phenotype
- 8015 Glassy cell carcinoma
- 8020 Carcinoma, undifferentiated, NOS
- 8021 Carcinoma, anaplastic, NOS
- 8022 Pleomorphic carcinoma
- 8030 Giant cell and spindle cell carcinoma
- 8031 Giant cell carcinoma
- 8032 Spindle cell carcinoma, NOS
- 8033 Pseudosarcomatous carcinoma
- 8034 Polygonal cell carcinoma
- 8035 Carcinoma with osteoclast-like giant cells
- 8041 Small cell carcinoma, NOS
- 8042 Oat cell carcinoma
- 8043 Small cell carcinoma, fusiform cell
- 8044 Small cell carcinoma, intermediate cell
- 8045 Combined small cell carcinoma
- 8046 Non-small cell carcinoma
- 8050 Papillary carcinoma, NOS
- 8051 Verrucous carcinoma, NOS
- 8052 Papillary squamous cell carcinoma
- 8070 Squamous cell carcinoma, NOS
- 8071 Squamous cell carcinoma, keratinizing, NOS
- 8072 Squamous cell carcinoma, large cell, nonkeratinizing, NOS
- 8073 Squamous cell carcinoma, small cell, nonkeratinizing
- 8074 Squamous cell carcinoma, spindle cell
- 8075 Squamous cell carcinoma, adenoid
- 8076 Squamous cell carcinoma, microinvasive
- 8078 Squamous cell carcinoma with horn formation
- 8082 Lymphoepithelial carcinoma
- 8083 Basaloid squamous cell carcinoma
- 8084 Squamous cell carcinoma, clear cell type
- 8090 Basal cell carcinoma, NOS
- 8091 Multifocal superficial basal cell carcinoma
- 8092 Infiltrating basal cell carcinoma, NOS
- 8093 Basal cell carcinoma, fibroepithelial
- 8094 Basosquamous carcinoma
- 8095 Metatypical carcinoma
- 8097 Basal cell carcinoma, nodular
- 8098 Adenoid basal carcinoma
- 8102 Trichilemmocarcinoma
- 8110 Pilomatrix carcinoma
- 8120 Transitional cell carcinoma, NOS
- 8121 Schneiderian carcinoma
- 8122 Transitional cell carcinoma, spindle cell
- 8123 Basaloid carcinoma
- 8124 Cloacogenic carcinoma
- 8130 Papillary transitional cell carcinoma
- 8131 Transitional cell carcinoma, micropapillary
- 8140 Adenocarcinoma, NOS
- 8141 Scirrhous adenocarcinoma
- 8142 Linitis plastica
- 8143 Superficial spreading adenocarcinoma
- 8144 Adenocarcinoma, intestinal type
- 8145 Carcinoma, diffuse type
- 8147 Basal cell adenocarcinoma
- 8150 Islet cell carcinoma
- 8151 Insulinoma, malignant
- 8152 Glucagonoma, malignant
- 8153 Gastrinoma, malignant
- 8154 Mixed islet cell and exocrine adenocarcinoma
- 8155 Vipoma, malignant
- 8156 Somatostatinoma, malignant

8157 Enteroglucagonoma, malignant  
 8160 Cholangiocarcinoma  
 8161 Bile duct cystadenocarcinoma  
 8162 Klatskin tumor  
 8170 Hepatocellular carcinoma, NOS  
 8171 Hepatocellular carcinoma, fibrolamellar  
 8172 Hepatocellular carcinoma, scirrhous  
 8173 Hepatocellular carcinoma, spindle cell variant  
 8174 Hepatocellular carcinoma, clear cell type  
 8175 Hepatocellular carcinoma, pleomorphic type  
 8180 Combined hepatocellular carcinoma and cholangiocarcinoma  
 8190 Trabecular adenocarcinoma  
 8200 Adenoid cystic carcinoma  
 8201 Cribriform carcinoma, NOS  
 8210 Adenocarcinoma in adenomatous polyp  
 8211 Tubular adenocarcinoma  
 8214 Parietal cell carcinoma  
 8215 Adenocarcinoma of anal glands  
 8220 Adenocarcinoma in adenomatous polyposis coli  
 8221 Adenocarcinoma in multiple adenomatous polyps  
 8230 Solid carcinoma, NOS  
 8231 Carcinoma simplex  
 8240 Carcinoid tumor, NOS  
 8241 Enterochromaffin cell carcinoid  
 8242 Enterochromaffin-like cell tumor, malignant  
 8243 Goblet cell carcinoid  
 8244 Composite carcinoid  
 8245 Adenocarcinoid tumor  
 8246 Neuroendocrine carcinoma, NOS  
 8247 Merkel cell carcinoma  
 8249 A typical carcinoid tumor  
 8250 Bronchiolo-alveolar adenocarcinoma, NOS  
 8251 Alveolar adenocarcinoma  
 8252 Bronchiolo-alveolar carcinoma, non-mucinous  
 8253 Bronchiolo-alveolar carcinoma, mucinous  
 8254 Bronchiolo-alveolar carcinoma, mixed mucinous / non-mucinous  
 8255 Adenocarcinoma with mixed subtypes  
 8260 Papillary adenocarcinoma, NOS  
 8261 Adenocarcinoma in villous adenoma  
 8262 Villous adenocarcinoma  
 8263 Adenocarcinoma in tubulovillous adenoma  
 8270 Chromophobe carcinoma  
 8272 Pituitary carcinoma, NOS  
 8280 Acidophil carcinoma  
 8281 Mixed acidophil-basophil carcinoma  
 8290 Oxyphilic adenocarcinoma  
 8300 Basophil carcinoma  
 8310 Clear cell adenocarcinoma, NOS  
 8312 Renal cell carcinoma, NOS  
 8313 Clear cell adenocarcinofibroma  
 8314 Lipid-rich carcinoma  
 8315 Glycogen-rich carcinoma  
 8316 Cyst-associated renal cell carcinoma  
 8317 Renal cell carcinoma, chromophobe type  
 8318 Renal cell carcinoma, sarcomatoid  
 8319 Collecting duct carcinoma  
 8320 Granular cell carcinoma  
 8322 Water-clear cell adenocarcinoma  
 8323 Mixed cell adenocarcinoma  
 8330 Follicular adenocarcinoma, NOS  
 8331 Follicular adenocarcinoma, well differentiated  
 8332 Follicular adenocarcinoma, trabecular  
 8333 Fetal adenocarcinoma  
 8335 Follicular carcinoma, minimally invasive  
 8337 Insular carcinoma  
 8340 Papillary carcinoma, follicular variant  
 8341 Papillary microcarcinoma  
 8342 Papillary carcinoma, oxyphilic cell

8343 Papillary carcinoma, encapsulated  
 8344 Papillary carcinoma, columnar cell  
 8345 Medullary carcinoma with amyloid stroma  
 8346 Mixed medullary-follicular carcinoma  
 8347 Mixed medullary-papillary carcinoma  
 8350 Nonencapsulated sclerosing carcinoma  
 8370 Adrenal cortical carcinoma  
 8380 Endometrioid adenocarcinoma, NOS  
 8381 Endometrioid adenofibroma, malignant  
 8382 Endometrioid adenocarcinoma, secretory variant  
 8383 Endometrioid adenocarcinoma, ciliated cell variant  
 8384 Adenocarcinoma, endocervical type  
 8390 Skin appendage carcinoma  
 8400 Sweat gland adenocarcinoma  
 8401 Apocrine adenocarcinoma  
 8402 Nodular hidradenoma, malignant  
 8403 Malignant eccrine spiradenoma  
 8407 Sclerosing sweat duct carcinoma  
 8408 Eccrine papillary adenocarcinoma  
 8409 Eccrine poroma, malignant  
 8410 Sebaceous adenocarcinoma  
 8413 Eccrine adenocarcinoma  
 8420 Ceruminous adenocarcinoma  
 8430 Mucoepidermoid carcinoma  
 8440 Cystadenocarcinoma, NOS  
 8441 Serous cystadenocarcinoma, NOS  
 8450 Papillary cystadenocarcinoma, NOS  
 8452 Solid pseudopapillary carcinoma  
 8453 Intraductal papillary-mucinous carcinoma, invasive  
 8460 Papillary serous cystadenocarcinoma  
 8461 Serous surface papillary carcinoma  
 8470 Mucinous cystadenocarcinoma, NOS  
 8471 Papillary mucinous cystadenocarcinoma  
 8480 Mucinous adenocarcinoma  
 8481 Mucin-producing adenocarcinoma  
 8482 Mucinous adenocarcinoma, endocervical type  
 8490 Signet ring cell carcinoma  
 8500 Infiltrating duct carcinoma, NOS  
 8501 Comedocarcinoma, NOS  
 8502 Secretory carcinoma of breast  
 8503 Intraductal papillary adenocarcinoma with invasion  
 8504 Intracystic carcinoma, NOS  
 8508 Cystic hypersecretory carcinoma  
 8510 Medullary carcinoma, NOS  
 8512 Medullary carcinoma with lymphoid stroma  
 8513 Atypical medullary carcinoma  
 8514 Duct carcinoma, desmoplastic type  
 8520 Lobular carcinoma, NOS  
 8521 Infiltrating ductular carcinoma  
 8522 Infiltrating duct and lobular carcinoma  
 8523 Infiltrating duct mixed with other types of carcinoma  
 8524 Infiltrating lobular mixed with other types of carcinoma  
 8525 Polymorphous low grade adenocarcinoma  
 8530 Inflammatory carcinoma  
 8540 Paget disease, mammary  
 8541 Paget disease and infiltrating duct carcinoma of breast  
 8542 Paget disease, extramammary (except Paget disease of bone)  
 8543 Paget disease and intraductal carcinoma of breast  
 8550 Acinar cell carcinoma  
 8551 Acinar cell cystadenocarcinoma  
 8560 Adenosquamous carcinoma  
 8562 Epithelial-myoepithelial carcinoma  
 8570 Adenocarcinoma with squamous metaplasia  
 8571 Adenocarcinoma with cartilaginous and osseous metaplasia  
 8572 Adenocarcinoma with spindle cell metaplasia

8573 Adenocarcinoma with apocrine metaplasia

8574 Adenocarcinoma with neuroendocrine differentiation

8575 Metaplastic carcinoma, NOS

8576 Hepatoid adenocarcinoma

8580 Thymoma, malignant, NOS

8581 Thymoma, type A, malignant

8582 Thymoma, type AB, malignant

8583 Thymoma, type B1, malignant

8584 Thymoma, type B2, malignant

8585 Thymoma, type B3, malignant

8586 Thymic carcinoma, NOS

8588 Spindle epithelial tumor with thymus-like element

8589 Carcinoma showing thymus-like element

8600 Thecoma, malignant

8620 Granulosa cell tumor, malignant

8630 Androblastoma, malignant

8631 Sertoli-Leydig cell tumor, poorly differentiated

8634 Sertoli-Leydig cell, poorly diffn, with heterologous elements

8640 Sertoli cell carcinoma

8650 Leydig cell tumor, malignant

8670 Steroid cell tumor, malignant

8680 Paraganglioma, malignant

8693 Extra-adrenal paraganglioma, malignant

8700 Pheochromocytoma, malignant

8710 Glomangiosarcoma

8711 Glomus tumor, malignant

8720 Malignant melanoma, NOS (except juvenile melanoma)

8721 Nodular melanoma

8722 Balloon cell melanoma

8723 Malignant melanoma, regressing

8728 Meningeal melanomatosis

8730 Amelanotic melanoma

8740 Malignant melanoma in junctional nevus

8741 Malignant melanoma in precancerous melanosis

8742 Lentigo maligna melanoma

8743 Superficial spreading melanoma

8744 Acral lentiginous melanoma, malignant

8745 Desmoplastic melanoma, malignant

8746 Mucosal lentiginous melanoma

8761 Malignant melanoma in giant pigmented nevus

8770 Mixed epithelioid and spindle cell melanoma

8771 Epithelioid cell melanoma

8772 Spindle cell melanoma, NOS

8773 Spindle cell melanoma, type A

8774 Spindle cell melanoma, type B

8780 Blue nevus, malignant

8800 Sarcoma, NOS

8801 Spindle cell sarcoma

8802 Giant cell sarcoma (except of bone)

8803 Small cell sarcoma

8804 Epithelioid sarcoma

8805 Undifferentiated sarcoma

8806 Desmoplastic small round cell tumor

8810 Fibrosarcoma, NOS

8811 Fibromyxosarcoma

8812 Periosteal fibrosarcoma

8813 Fascial fibrosarcoma

8814 Infantile fibrosarcoma

8815 Solitary fibrous tumor, malignant

8830 Malignant fibrous histiocytoma

8832 Dermatofibrosarcoma, NOS

8833 Pigmented dermatofibrosarcoma protuberans

8840 Myxosarcoma

8850 Liposarcoma, NOS

8851 Liposarcoma, well differentiated

8852 Myxoid liposarcoma

8853 Round cell liposarcoma

8854 Pleomorphic liposarcoma

8855 Mixed liposarcoma

8857 Fibroblastic liposarcoma

8858 Dedifferentiated liposarcoma	9020 Phyllodes tumor, malignant
8890 Leiomyosarcoma, NOS	9040 Synovial sarcoma, NOS
8891 Epithelioid leiomyosarcoma	9041 Synovial sarcoma, spindle cell
8894 Angiomyosarcoma	9042 Synovial sarcoma, epithelioid cell
8895 Myosarcoma	9043 Synovial sarcoma, biphasic
8896 Myxoid leiomyosarcoma	9044 Clear cell sarcoma, NOS (except of kidney)
8900 Rhabdomyosarcoma, NOS	9050 Mesothelioma, malignant
8901 Pleomorphic rhabdomyosarcoma, adult type	9051 Fibrous mesothelioma, malignant
8902 Mixed type rhabdomyosarcoma	9052 Epithelioid mesothelioma, malignant
8910 Embryonal rhabdomyosarcoma, NOS	9053 Mesothelioma, biphasic, malignant
8912 Spindle cell rhabdomyosarcoma	9060 Dysgerminoma
8920 Alveolar rhabdomyosarcoma	9061 Seminoma, NOS
8921 Rhabdomyosarcoma with ganglionic differentiation	9062 Seminoma, anaplastic
8930 Endometrial stromal sarcoma, NOS	9063 Spermatocytic seminoma
8931 Endometrial stromal sarcoma, low grade	9064 Germinoma
8933 Adenosarcoma	9065 Germ cell tumor, nonseminomatous
8934 Carcinofibroma	9070 Embryonal carcinoma, NOS
8935 Stromal sarcoma, NOS	9071 Yolk sac tumor
8936 Gastrointestinal stromal sarcoma	9072 Polyembryoma
8940 Mixed tumor, malignant, NOS	9080 Teratoma, malignant, NOS
8941 Carcinoma in pleomorphic adenoma	9081 Teratocarcinoma
8950 Mullerian mixed tumor	9082 Malignant teratoma, undifferentiated
8951 Mesodermal mixed tumor	9083 Malignant teratoma, intermediate
8959 Malignant cystic nephroma	9084 Teratoma with malignant transformation
8960 Nephroblastoma, NOS	9085 Mixed germ cell tumor
8963 Malignant rhabdoid tumor	9090 Struma ovarii, malignant
8964 Clear cell sarcoma of kidney	9100 Choriocarcinoma, NOS
8970 Hepatoblastoma	9101 Choriocarcinoma combined with other germ cell elements
8971 Pancreatoblastoma	9102 Malignant teratoma, trophoblastic
8972 Pulmonary blastoma	9105 Trophoblastic tumor, epithelioid
8973 Pleuropulmonary blastoma	9110 Mesonephroma, malignant
8980 Carcinosarcoma, NOS	9120 Hemangiosarcoma
8981 Carcinosarcoma, embryonal	9124 Kupffer cell sarcoma
8982 Malignant myoepithelioma	9130 Hemangioendothelioma, malignant
8990 Mesenchymoma, malignant	9133 Epithelioid hemangioendothelioma, malignant
8991 Embryonal sarcoma	9140 Kaposi sarcoma
9000 Brenner tumor, malignant	9150 Hemangiopericytoma, malignant
9014 Serous adenocarcinofibroma	9170 Lymphangiosarcoma
9015 Mucinous adenocarcinofibroma	



9180 Osteosarcoma, NOS	9392 Ependymoma, anaplastic
9181 Chondroblastic osteosarcoma	9393 Papillary ependymoma
9182 Fibroblastic osteosarcoma	9400 Astrocytoma, NOS
9183 Telangiectatic osteosarcoma	9401 Astrocytoma, anaplastic
9184 Osteosarcoma in Paget disease of bone	9410 Protoplasmic astrocytoma
9185 Small cell osteosarcoma	9411 Gemistocytic astrocytoma
9186 Central osteosarcoma	9420 Fibrillary astrocytoma
9187 Intraosseous well differentiated osteosarcoma	9423 Polar spongioblastoma
9192 Parosteal osteosarcoma	9424 Pleomorphic xanthoastrocytoma
9193 Periosteal osteosarcoma	9430 Astroblastoma
9194 High grade surface osteosarcoma	9440 Glioblastoma, NOS
9195 Intracortical osteosarcoma	9441 Giant cell glioblastoma
9220 Chondrosarcoma, NOS	9442 Gliosarcoma
9221 Juxtacortical chondrosarcoma	9450 Oligodendroglioma, NOS
9230 Chondroblastoma, malignant	9451 Oligodendroglioma, anaplastic
9231 Myxoid chondrosarcoma	9460 Oligodendroblastoma
9240 Mesenchymal chondrosarcoma	9470 Medulloblastoma, NOS
9242 Clear cell chondrosarcoma	9471 Desmoplastic nodular medulloblastoma
9243 Dedifferentiated chondrosarcoma	9472 Medullomyoblastoma
9250 Giant cell tumor of bone, malignant	9473 Primitive neuroectodermal tumor, NOS
9251 Malignant giant cell tumor of soft parts	9474 Large cell medulloblastoma
9252 Malignant tenosynovial giant cell tumor	9480 Cerebellar sarcoma, NOS
9260 Ewing sarcoma	9490 Ganglioneuroblastoma
9261 Adamantinoma of long bones	9500 Neuroblastoma, NOS
9270 Odontogenic tumor, malignant	9501 Medulloepithelioma, NOS
9290 Ameloblastic odontosarcoma	9502 Teratoid medulloepithelioma
9310 Ameloblastoma, malignant	9503 Neuroepithelioma, NOS
9330 Ameloblastic fibrosarcoma	9504 Spongioneuroblastoma
9342 Odontogenic carcinosarcoma	9505 Ganglioglioma, anaplastic
9362 Pineoblastoma	9508 Atypical teratoid/rhabdoid tumor
9364 Peripheral neuroectodermal tumor	9510 Retinoblastoma, NOS
9365 Askin tumor	9511 Retinoblastoma, differentiated
9370 Chordoma, NOS	9512 Retinoblastoma, undifferentiated
9371 Chondroid chordoma	9513 Retinoblastoma, diffuse
9372 Dedifferentiated chordoma	9520 Olfactory neurogenic tumor
9380 Glioma, malignant	9521 Olfactory neurocytoma
9381 Gliomatosis cerebri	9522 Olfactory neuroblastoma
9382 Mixed glioma	9523 Olfactory neuroepithelioma
9390 Choroid plexus carcinoma	9530 Meningioma, malignant
9391 Ependymoma, NOS	9538 Papillary meningioma
	9539 Meningeal sarcomatosis

9540 Malignant peripheral nerve sheath tumor

9560 Neurilemoma, malignant

9561 Malig. peripheral nerve sheath tumor, rhabdomyoblastic difftn.

9571 Perineurioma, malignant

9580 Granular cell tumor, malignant

9581 Alveolar soft part sarcoma

9590 Malignant lymphoma, NOS

9591 Malignant lymphoma, non-Hodgkin, NOS

9596 Composite Hodgkin and non-Hodgkin lymphoma

9650 Hodgkin lymphoma, NOS

9651 Hodgkin lymphoma, lymphocyte-rich

9652 Hodgkin lymphoma, mixed cellularity, NOS

9653 Hodgkin lymphoma, lymphocyte depletion, NOS

9654 Hodgkin lymphoma, lymphocyte depletion, diffuse fibrosis

9655 Hodgkin lymphoma, lymphocyte depletion, reticular

9659 Hodgkin lymphoma, nodular lymphocyte predominance

9661 Hodgkin granuloma

9662 Hodgkin sarcoma

9663 Hodgkin lymphoma, nodular sclerosis, NOS

9664 Hodgkin lymphoma, nodular sclerosis, cellular phase

9665 Hodgkin lymphoma, nodular sclerosis, grade 1

9667 Hodgkin lymphoma, nodular sclerosis, grade 2

9670 Malignant lymphoma, small B lymphocytic, NOS

9671 Malignant lymphoma, lymphoplasmacytic

9673 Mantle cell lymphoma

9675 Malignant lymphoma, mixed small and large cell, diffuse

9678 Primary effusion lymphoma

9679 Mediastinal large B-cell lymphoma

9680 Malignant lymphoma, large B-cell, diffuse, NOS

9684 Malignant lymphoma, large B-cell, diffuse, immunoblastic, NOS

9687 Burkitt lymphoma, NOS

9689 Splenic marginal zone B-cell lymphoma

9690 Follicular lymphoma, NOS

9691 Follicular lymphoma, grade 2

9695 Follicular lymphoma, grade 1

9698 Follicular lymphoma, grade 3

9699 Marginal zone B-cell lymphoma, NOS

9700 Mycosis fungoides

9701 Sezary syndrome

9702 Mature T-cell lymphoma, NOS

9705 Angioimmunoblastic T-cell lymphoma

9708 Subcutaneous panniculitis-like T-cell lymphoma

9709 Cutaneous T-cell lymphoma, NOS

9714 Anaplastic large cell lymphoma, T cell and Null cell type

9716 Hepatosplenic (gamma-delta) cell lymphoma

9717 Intestinal T-cell lymphoma

9718 Primary cutaneous CD30+ T-cell lymphoproliferative disorder

9719 NK/T-cell lymphoma, nasal and nasal-type

9727 Precursor cell lymphoblastic lymphoma, NOS

9728 Precursor B-cell lymphoblastic lymphoma

9729 Precursor T-cell lymphoblastic lymphoma

9731 Plasmacytoma, NOS

9732 Multiple myeloma

9733 Plasma cell leukemia

9734 Plasmacytoma, extramedullary (not occurring in bone)  
 9740 Mast cell sarcoma  
 9741 Malignant mastocytosis  
 9742 Mast cell leukemia  
 9750 Malignant histiocytosis  
 9754 Langerhans cell histiocytosis, disseminated  
 9755 Histiocytic sarcoma  
 9756 Langerhans cell sarcoma  
 9757 Interdigitating dendritic cell sarcoma  
 9758 Follicular dendritic cell sarcoma  
 9760 Immunoproliferative disease, NOS  
 9761 Waldenstrom macroglobulinemia  
 9762 Heavy chain disease, NOS  
 9764 Immunoproliferative small intestinal disease  
 9800 Leukemia, NOS  
 9801 Acute leukemia, NOS  
 9805 Acute biphenotypic leukemia  
 9820 Lymphoid leukemia, NOS  
 9823 B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma  
 9826 Burkitt cell leukemia  
 9827 Adult T-cell leukemia/lymphoma (HTLV-1 positive)  
 9832 Prolymphocytic leukemia, NOS  
 9833 Prolymphocytic leukemia, B-cell type  
 9834 Prolymphocytic leukemia, T-cell type  
 9835 Precursor cell lymphoblastic leukemia, NOS  
 9836 Precursor B-cell lymphoblastic leukemia  
 9837 Precursor T-cell lymphoblastic leukemia  
 9840 Acute myeloid leukemia, M6 type  
 9860 Myeloid leukemia, NOS  
 9861 Acute myeloid leukemia, NOS  
 9863 Chronic myeloid leukemia, NOS  
 9866 Acute promyelocytic leukemia, t(15;17)(q22;q11-12)  
 9867 Acute myelomonocytic leukemia  
 9870 Acute basophilic leukemia  
 9871 Acute myeloid leukemia with abnormal marrow eosinophils  
 9872 Acute myeloid leukemia, minimal differentiation  
 9873 Acute myeloid leukemia without maturation  
 9874 Acute myeloid leukemia with maturation  
 9875 Chronic myelogenous leukemia, BCR/ABL positive  
 9876 Atypical chronic myeloid leukemia, BCR/ABL negative  
 9891 Acute monocytic leukemia  
 9895 Acute myeloid leukemia with multilineage dysplasia  
 9896 Acute myeloid leukemia, t(8;21)(q22;q22)  
 9897 Acute myeloid leukemia, 11q23 abnormalities  
 9910 Acute megakaryoblastic leukemia  
 9920 Therapy-related acute myeloid leukemia, NOS  
 9930 Myeloid sarcoma  
 9931 Acute panmyelosis with myelofibrosis  
 9940 Hairy cell leukemia  
 9945 Chronic myelomonocytic leukemia, NOS  
 9946 Juvenile myelomonocytic leukemia  
 9948 Aggressive NK-cell leukemia  
 9950 Polycythemia vera  
 9960 Chronic myeloproliferative disease, NOS  
 9961 Myelosclerosis with myeloid metaplasia  
 9962 Essential thrombocythemia  
 9963 Chronic neutrophilic leukemia  
 9964 Hypereosinophilic syndrome  
 9980 Refractory anemia  
 9982 Refractory anemia with sideroblasts  
 9983 Refractory anemia with excess blasts  
 9984 Refractory anemia with excess blasts in transformation

9985 Refractory cytopenia with multilineage dysplasia

9986 Myelodysplastic syndrome with 5q-syndrome

9987 Therapy-related myelodysplastic syndrome, NOS

9989 Myelodysplastic syndrome, NOS

## Appendix 2: ICD-O-3 Coding for behaviour

### Code Behaviour

0	Benign
1	Uncertain
2	In situ
3	Malignant

### Appendix 3: Coding for Gulu Cancer Registry Catchment Area

<b>GULU DISTRICT</b>			
Counties/Sub-Counties	Codes	Parishes	Codes
<b>Gulu Municipality County Codes = 101 &amp; 102</b>			
<b>Gulu Municipality, Laro</b>	101	Agwee	101.1
		Iriaga	101.2
		Pece-prisons	101.3
		Queens avenue	101.4
<b>Gulu Municipality, Layibi</b>		Kirombe	101.5
		Library	101.6
		Patuda	101.7
		Techo	101.8
<b>Gulu Municipality, Pece</b>	102	Labour Line	102.1
		Pawel	102.2
		Tegwana	102.3
		Vanguard	102.4
<b>Gulu Municipality, Bardege</b>		Bardege	102.5
		Kanyagoga	102.6
		Kasubi	102.7
		For God	102.8
<b>Aswa County Code = 103</b>			
<b>Aswa, Awach</b>	104	Gwengdiya	104.1
		Paduny	104.2
		Pukony	104.3
		Paibona	104.4
<b>Aswa, Bungatira</b>	105	Punena	105.1
		Atiaba	105.2
		Pabwo	105.3
		Agonga	105.4
		Oitino	105.5
		Laliya	105.6
		Laro	105.7
		Pakwelo	106.1
		Kal-Umu	106.2

<b>Aswa, Paicho</b>	106	Unyama	106.3
		Angaya	106.4
		Kal-Ali	106.5
		Pagik	106.6
		Omel	106.7
<b>Aswa, Palaro</b>	107	Mede	107.1
		Labworomor	107.2
		Owalo	107.3
<b>Aswa, Patiko</b>	108	Kal	108.1
		Pawel	108.2
		Pugwinyi	108.3
<b>Omoro County Code = 110</b>			
<b>Omoro, Bobi</b>	111	Paidwe	111.1
		Palwo	111.2
		Palenga	111.3
		Patek	111.4
		Paidongo	111.5
<b>Omoro, Koro</b>	112	Lapainat West	112.1
		Lapainat East	112.2
		Pageya	112.3
		Ibakara	112.4
		Labwoc	112.5
		Acoyo	112.6
<b>Omoro, Lakwana</b>	113	Lujorongole	113.1
		Lanenober	113.2
		Tee-got	113.3
		Parak	113.4
<b>Omoro, Lalogi</b>	114	Idobo	114.1
		Lukwir	114.2
		Parwec	114.3
		Gem	114.4
		Jaka	114.5
<b>Omoro, Odek</b>	115	Palaro	115.1
		Binya	115.2
		Lamola	115.3
		Lukwor	115.4
		Lujorongole	115.5
<b>Omoro, Ongako</b>	116	Alokolum	116.1
		Abwoc	116.2
		Patuda	116.3
		Onyona	116.4
		Kal	116.5

<b>AMURU DISTRICT</b>			
Counties/Sub-Counties	Codes	Parishes	Codes
<b>Kilak County Code= 120</b>			
<b>Kilak, Amuru</b>	121	Acwera	121.1
		Pailyec	121.2
		Okungedi	121.3
		Pamuca	121.4
		Toro	121.5
		Amuru	121.6
		Pagak	121.7
<b>Kilak, Atiak</b>	122	Bibia	122.1
		Pacilo	122.3
		Okidi	122.4
		Pawel	122.5
		Palukere	122.6
		Pupwonya	122.7
		Parwacha	122.8
		Kal	122.9
<b>Kilak,Lamogi</b>	123	Guruguru	123.1
		Giragira	123.2
		Oboo	123.3
		Pagoro	123.4
		Coke	123.5
		Agwar Yugi	123.6
		Palema	123.7
		Lacor	123.8
<b>Kilak, Pabbo</b>	124	Pabbo	124.1
		Labala	124.2
		Pogo	124.3
		Parubanga	124.4
		Gaya	124.5
		Palwong	124.6
		Kal	124.7

<b>NWOYA DISTRICT</b>			
Counties /Sub-Counties	Codes	Parishes	Codes
<b>Nwoya County Code= 130</b>			
<b>Nwoya, Alero</b>	131	Paibwor	131.1
		Bwobomanam	131.2
		Panokrach	131.3
		Alero Kal	131.4
		Pangu	131.5
		Panyabono	131.6
<b>Nwoya, Anaka</b>	132	Pabali	132.1
		Ywaya	132.3
		Pangora	132.4
		Paduny	132.5
		Kuluamuka	132.6
		Todora	132.7
<b>Nwoya, Purongo</b>	133	Latoro	133.1
		Pabit	133.2
		Patira Odora	133.3
		Pawatomera	133.4
		Paromo	133.5
<b>Nwoya, Kochgoma</b>	134	Amar	134.1
		Agonga	134.2
		Kal	134.3
		Coo-rom	134.4
		Lii	134.5
		Orum	134.6



## Appendix 4a: Other codes used

<b>Variable name</b>	<b>Code used</b>
<b>Sex</b>	
Male	1
Female	2
Unknown	9
<b>Source of information</b>	
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
<b>Laboratories</b>	
Lacor Pathology Gulu	10
Lab-Makerere	80
Lab-MultiSystem	81
Lab-Metromed	82
Lab-Nsambya	83
<b>Basis of diagnosis</b>	
Death Certificate only	0
Clinical Only	1
Clinical Investigation (Xray, US, Endoscopy etc)	2
Specific Tumour Markers	4
Cytology/Haematology	5
Histology of metastasis	6
Histology of primary	7
Unknown	9
<b>Treatment; Surgery, RadioT, Chemo, Horm. etc</b>	
Yes	1
No	2
Unknwon	9
<b>Follow up at Last Contact</b>	
Alive	1
Dead	2

Unknown	9
Cause of death this cancer	1
Other cause of death	2
Cause of death Not Known	9

#### Appendix 4b: 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

#### Appendix 5: Coding for ethnic groups

##### Code Tribe

01	Acholi/Labwor
02	Alur/Jonam
03	Baamba
04	Bachope
05	Bachope/Dhola
06	Bafumbira
07	Baganda
08	Bagisu/Masaba
09	Bagwe
10	Bagwere
11	Bahororo
12	Bakiga
13	Bakonjo
14	Banyankore/Hima
15	Banyarwanda
16	Banyore
17	Banyoro/Gungu
18	Baruli
19	Barundi



20	Basoga
21	Batoro/Tuku/Songora
22	Batwa/Pygmi
23	Itesot
24	Kakwa
25	Karimajong/Doth/Suk
26	Kunam
27	Langi
28	Lugbara/Aringa
29	Madi
30	Nubian
31	Samia
32	Sebei
33	Other Ugandan
34	Other
35	WHITE
36	ASIAN
37	Sudanese
99	Unknown

**Appendix 6: Table showing the population of Gulu, Amuru and Nwoya Districts**

Age Group	AMURU		GULU		NWOYA		TOTAL		
	Male	Female	Male	Female	Male	Female	Male	Female	M+F
<b>0-4:</b>	10,560	10,896	23,556	24,024	3,192	3,288	37,308	38,208	<b>75,516</b>
<b>5-9:</b>	8,800	9,080	19,630	20,020	2,660	2,740	31,090	31,840	<b>62,930</b>
<b>10-14:</b>	7,920	8,172	17,667	18,018	2,394	2,466	27,981	28,656	<b>56,637</b>
<b>15-19:</b>	7,920	8,172	17,667	18,018	2,394	2,466	27,981	28,656	<b>56,637</b>
<b>20-24:</b>	7,040	7,264	15,704	16,016	2,128	2,192	24,872	25,472	<b>50,344</b>
<b>25-29:</b>	7,040	7,264	15,704	16,016	2,128	2,192	24,872	25,472	<b>50,344</b>
<b>30-34:</b>	5,280	5,448	11,778	12,012	1,596	1,644	18,654	19,104	<b>37,758</b>
<b>35-39:</b>	5,280	5,448	11,778	12,012	1,596	1,644	18,654	19,104	<b>37,758</b>
<b>40-44:</b>	5,280	5,448	11,778	12,012	1,596	1,644	18,654	19,104	<b>37,758</b>
<b>45-49:</b>	5,280	5,448	11,778	12,012	1,596	1,644	18,654	19,104	<b>37,758</b>
<b>50-54:</b>	4,400	4,540	9,815	10,010	1,330	1,370	15,545	15,920	<b>31,465</b>
<b>55-59:</b>	3,520	3,632	7,852	8,008	1,064	1,096	12,436	12,736	<b>25,172</b>
<b>60-64:</b>	3,520	3,632	7,852	8,008	1,064	1,096	12,436	12,736	<b>25,172</b>
<b>65-69:</b>	2,640	2,724	5,889	6,006	798	822	9,327	9,552	<b>18,879</b>
<b>70-74:</b>	1,760	1,816	3,926	4,004	532	548	6,218	6,368	<b>12,586</b>
<b>75 +:</b>	1,760	1,816	3,926	4,004	532	548	6,218	6,368	<b>12,586</b>
<b>TOTAL</b>	<b>88,000</b>	<b>90,800</b>	<b>196,300</b>	<b>200,200</b>	<b>26,600</b>	<b>27,400</b>	<b>310,900</b>	<b>318,400</b>	<b>629,300</b>

*Source: UBOS, 2012 population projections for Districts in Uganda (accessed on 26<sup>th</sup> June 2014 at [http://www.ubos.org/onlinefiles/uploads/ubos/pdf%20documents/Dist\\_%20profile\\_18072011.xls](http://www.ubos.org/onlinefiles/uploads/ubos/pdf%20documents/Dist_%20profile_18072011.xls))*

## Appendix 8: Gulu Cancer Notification Form

	<p><b>GULU CANCER REGISTRY</b>  <b>P.O BOX 180 GULU, UGANDA</b>  <b>Email: gulucancerregistry@gmail.com</b>  <b>CANCER NOTIFICATION FORM</b></p>	
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**Cancer Registry Number**

### 1. PATIENT

I.D. Number: \_\_\_\_\_

Given Name (First name(s)) .....

Surname (Family Name).....

Date of birth       Age:   Sex:  (1=Male, 2=Female, 9=NK)

Usual residence address: (Village, Parish, County & District).....

.....

Patient/NOK Telephone No: .....

LC1 leader Name/Telephone Number: .....

Ethnic group: .....

### 2. TUMOUR

Date of incidence:       (dd/mm/yyyy)

Basis of diagnosis:  0. Death Certificate only 4. Specific tumour markers 6. Histology of metastasis

1. Clinical only 5. Cytology/Haematology 7. Histology of Primary

2. Clinical investigations (Xray, US etc) 9. Unknown

Primary site of tumour: .....C

Morphology: ..... M

Stage: .....   T:  N:  M:

### 3. TREATMENT

Surgery  Radiotherapy  Chemo/Hormonal  Other (Specify).....

(1=Yes, 2= No, 9= Unknown)

### 4. SOURCE OF INFORMATION

Institution/Ward \_\_\_\_\_

Case number \_\_\_\_\_

Laboratory \_\_\_\_\_ Lab number: \_\_\_\_\_

### 5. FOLLOW UP

Date of last contact (dd/mm/yyyy): \_\_\_\_\_

Status at last contact (1= alive, 2 = dead, 9 = NK) \_\_\_\_\_

Cause of death (1 = this cancer, 2 = other cause, 9 = NK) \_\_\_\_\_

Form filed by: \_\_\_\_\_ Date: \_\_\_\_\_ Sign: \_\_\_\_\_

Data entered by: \_\_\_\_\_ Date: \_\_\_\_\_ Sign: \_\_\_\_\_

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