3
Data Collection

3.1
Case-finding

Case-finding is the system used for locating every new case of cancer that comes from the area covered by the registry, and which is diagnosed and/or treated on or after the registry's reference date (the date the registry began collecting data on cancer).

Question:

What diagnoses should be reported to the registry (reportable diagnoses) ?

Answer:

All cases considered as malignant in the Morphology section of the International Classification of Diseases for Oncology (ICD-O) should be reported to the registry. A written list of the diagnoses to be reported (reportable list) includes:

(a) all cases of carcinoma and sarcoma and all cases considered as malignant in the Morphology section of ICD-O;

(b) selected in-situ and benign tumours as well as selected tumours of uncertain behaviour which are of interest to the registry staff and/or the cancer committee. Registries may differ as to which neoplasms from this group are to be included in the registry.

An example of a reportable list is given in Appendix 3.1.

Question:

What is the responsibility of the tumour registrar in this regard ?

Answer:

It is the responsibility of the tumour registrar to obtain a clear agreement with his supervisor or the cancer committee on the list of tumours to include in the registry. The basic criterion in determining whether a tumour is reportable or not is a diagnosis of cancer by a physician or dentist, whether clinically diagnosed or histologically proven. A positive pathology report takes precedence over other reports or statements in a patient's chart.

3.1.1 Methods of case-finding and tracking systems

Case-finding and abstracting may or may not be done at the same time. In many registries case-finding is done first (see Figure 1).

A case-finding list is prepared for each of the data sources in a hospital. This list should indicate the patient's name, age, sex, hospital case number, address (if available), date of diagnosis and result of examination. The list is arranged alphabetically for easier matching prior to abstracting. An example of a case-finding list is given in Figure 2.

The next step is to abstract the medical records and combine the information gathered from the different data sources in a hospital.

It is recommended that each registry have a written log or tracking system so that registry or supervisory personnel can see at any time which potential sources of cases have been covered and when. An example is given in the general case-finding form (Figure 3) which indicates the hospital and year, and the date case-finding was started and finished for each of the different data sources in a given hospital.

3.1.2 Sources of cases

The main sources of information on cancer cases are hospital and pathology laboratory records and, where available, death certificates. However, a population-based registry may cover private clinics, general practitioners, coroners, hospices, health insurance systems, screening programmes to ensure completeness of data collection.

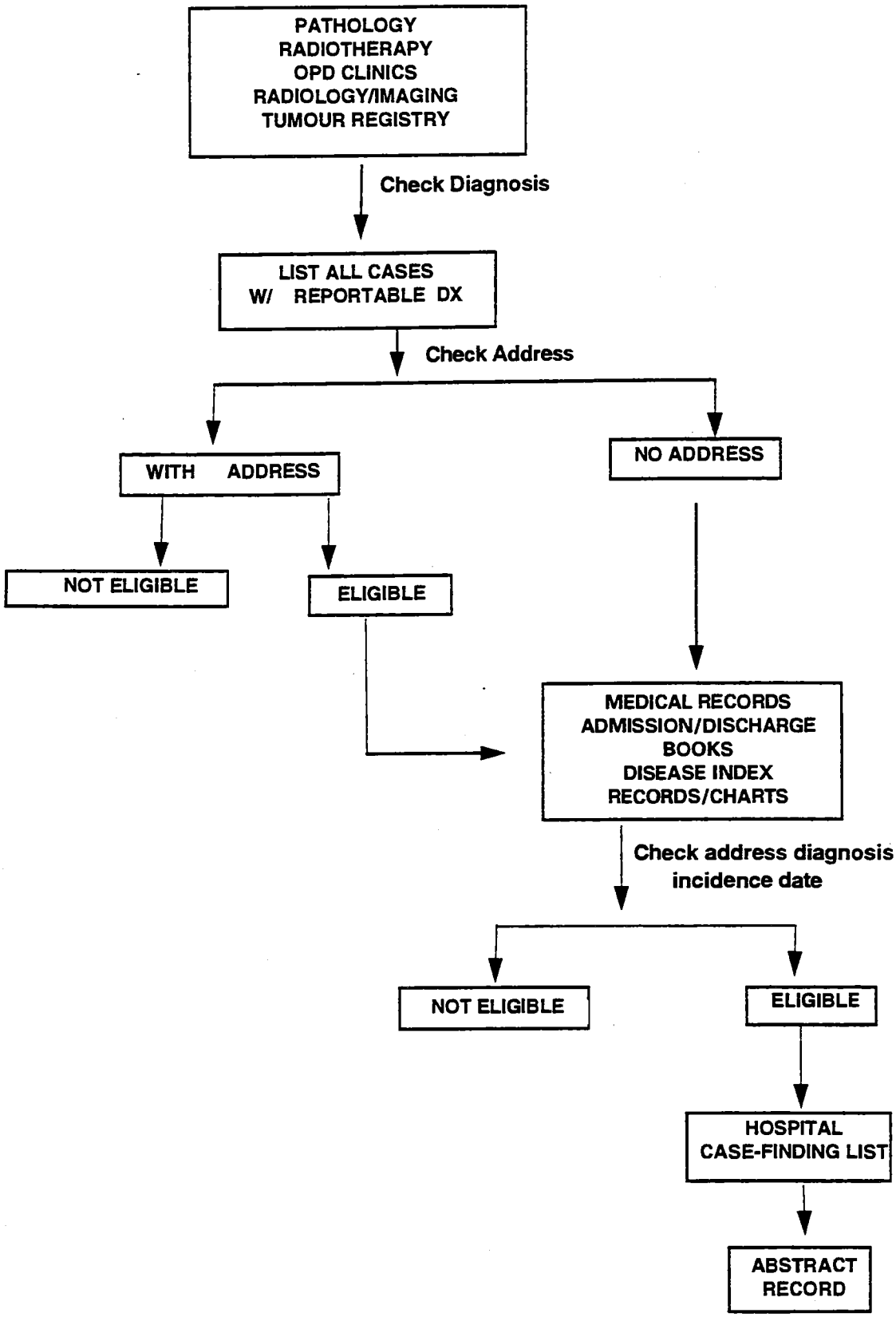

Figure 1. Flow chart for casefinding in hospitals

Department of Health – Rizal Cancer Registry, Rizal Medical Center
Pasig, Metro Manila
Hospital: **Source:**

Year:

CASE-FINDING LIST					
Hospital case no.	**Name Last First**	**Age/sex**	**Address**	**Date admiss. or dx**	**Diagnosis/ Result**

Prepared by: **Date**

Figure 2. Example of a case-finding list

In the hospital, case-finding involves a careful monitoring of the records kept by the different services and departments which deal with cancer patients. These include the medical records department; outpatient clinics; pathology and haematology laboratories; radiotherapy units, radiology, ultrasonography, nuclear medicine, computerized tomography and magnetic resonance imaging, and any hospital tumour registry. Record keeping may vary from hospital to hospital,and it is important that cancer registry personnel looking for cases be acquainted with the system of record keeping used in the different hospitals.

If death certificates are available, these are an important source of cases. Whenever possible, the original death certificates should be consulted. Malignant cancers mentioned anywhere in the death certificate should be identified and abstracted (see Section 3.3.10).

Question:

What are the data sources in a hospital?

Answer:

The data sources in a hospital are:

(a) *Medical records:*

- inpatient records:
  - admission and discharge books/ records
  - medical record disease index
- outpatient records:
  - general outpatient records
  - special clinics

Examples of specialized outpatient clinics are:

medical oncology, gynaecological oncology, haematology, urology, eye, ear, nose, throat, breast, dermatology, endoscopy

(b) *Pathology records:*

- surgical pathology and haematology reports/logbooks
- autopsy reports/logbooks
- cytology reports/logbooks

(c) *Radiotherapy records/logs*

(d) *Radiology, ultrasonography, nuclear medicine, computerized tomography and magnetic resonance imaging logs/reports*

(e) *Hospital tumour registry*

Each registry should have written procedures and instructions for carrying out complete case-finding.

3.1.3 Steps in case-finding in the different hospital data sources

(1) *Medical records*

The inpatient medical records may or may not be kept separately from those of outpatients. The cancer registry personnel should be acquainted with the system used in a given hospital.

(a) Inpatient medical records

Case-finding in the inpatient medical records is carried out mainly by reviewing the admission and discharge records as well as the medical record disease index or any index which might exist.

(i) *Admission and discharge records*: The list of patients admitted and discharged in each hospital covered by the registry should be reviewed. The cases with reportable diagnoses **who are residents of the catchment area of the registry** should be identified.

In some hospitals, the lists of admissions and discharges are kept together in a single logbook. This list gives the patient's name, age, sex, case number, dates of admission and discharge, diagnosis on admission and final diagnosis. The address may or may not be included. In some hospitals, these may be in card files or nowadays in a computer file. If the address is not given, list all cases with reportable diagnoses.

In some hospitals, the list of admissions and that of the daily discharges are kept separately. Be sure to review both lists.

Looking at the admissions and discharges in a given hospital will ensure the collection of most cases, including those which were clinically diagnosed (no histopathological or cytological examinations) and those which were diagnosed histologically elsewhere, and for which there is no record in the pathology department. If there is a

discrepancy between the diagnosis on admission and that on discharge, the discharge diagnosis is preferred.

Vague or ambiguous terms may sometimes be used by physicians to describe a tumour when its behaviour is uncertain, especially when there is no histological diagnosis. The terms subject to doubt will vary from country to country, and each registry should define its own rules.

For example, the following terms used in one country indicate that the tumour is reportable:

- apparently (malignant)
- presumed (malignant)
- compatible with (malignancy)
- probable (malignancy)
- consistent with (malignancy)
- suspect or suspected (malignancy)
- favour (a malignancy)
- suspicious (of malignancy)
- most likely (malignant)
- typical (of/for malignancy)

The terms below would indicate that the tumour is **not reportable**:

- "approaching"
- "rule out"
- "equivocal"
- "suggests"
- "possible"
- "very close to"
- "questionable"
- "worrisome"

In cases where the diagnosis remains doubtful, the details of the case should be abstracted but kept in a holding file (see Chapter 5).

(ii) *Review of the medical record disease index*: The cancer registry personnel should be acquainted with the system used by the medical records department in keeping its disease index. In most hospitals the disease index is arranged according to the International Classification of Diseases (ICD) code numbers. For some smaller hospitals these may not be available. The case-finder should have a list of the codes which are reportable to the registry. For the sake of simplicity, this manual refers to the ICD. If a different system is used in a given hospital, the abstractor should be familiar with that system.

The cancer registry personnel should also be acquainted with the system used by the medical records in a given hospital to assign hospital case numbers. Some hospitals assign a case number each time a patient is admitted (**serial numbering system**). Others assign the patient a number which stays with that patient for all admissions (**unit numbering system**).

The numbering system can influence case-finding procedures, especially if matching of patients is being attempted by matching medical record numbers instead of names.

The medical record disease index gives the patient's name, age, sex, hospital case number, and diagnosis (usually in ICD codes). Usually the address is not given. All reportable cases encountered in the index should be listed. The main aim of reviewing the medical record disease index is to ensure completeness of case-finding.

IN SOME HOSPITALS, HOWEVER, THE DISEASE INDEX MAY BE INCOMPLETE AND NEED UPDATING, SO IT IS IMPORTANT TO COVER ALL AVAILABLE DATA SOURCES IN THE HOSPITAL IN ORDER TO ACHIEVE COMPLETE REGISTRATION.

(b) Outpatient medical records

The cancer registry personnel doing case-finding should know the different areas where cancer patients are seen in an outpatient setting. The outpatient clinic personnel can show the case-finder new logbooks or patient appointment listings which identify new patients.

In the general outpatient medical records, the outpatient logbooks should be reviewed. These give information on the name, age, sex, case number, date of consultation, and

diagnosis. Because of the bulk of patients seen in the outpatient department, identification of new patients may pose some problems. As a solution, one may ask the outpatient clinic personnel to flag new cases for easier identification. However, since many hospitals can be covered by the population-based registry, this is not always possible.

In some hospitals, especially in tertiary hospitals and medical centres, cancer patients may be seen under some specialized clinics on an outpatient basis. These specialized clinics include the following: medical oncology, gynaecological oncology, haematology, urology, ENT, dermatology, breast and endoscopy clinics. The cancer registry personnel in charge of case-finding should know where these specialized clinics are and how the records are kept to ensure complete coverage.

(2) Pathology records

These include histology, cytology, haematology, bone marrow examination and autopsy findings. Since such examinations are done for the majority of suspected cancer cases, a high percentage of reportable cases will be found by reviewing those from the pathology department with a diagnosis of cancer.

(a) Surgical pathology reports and logs

The pathology reports and logbooks (records) in the pathology department are usually filed numerically by accession number and the year of examination is usually indicated. All pathology reports should be reviewed, making sure that all accession numbers are accounted for. This is the preferred method of case-finding.

Pathology results may be sent by the pathology secretaries to the cancer registry office. If this method is used for case-finding, there should be a system which will allow for checking of completeness. This may be done, for example, by random checking of the pathology reports and logbooks in the hospital, to determine if there are any reportable cases for which pathology reports were not sent to the registry office. Quality control procedures in cancer reporting systems have demonstrated that pathology reports do not always reach the registry, for various reasons, hence the need for checking for completeness.

(b) Autopsy reports and logbooks

Autopsy reports, just like surgical pathology reports, are filed numerically by accession number. In reviewing the reports as well as the autopsy logbooks, make sure that all accession numbers are accounted for.

Review all the diagnoses recorded, not only those which caused death. Malignancies not suspected during life (occult) may be found on autopsy.

Two types of report are usually made following autopsy:

(i) the provisional anatomical diagnosis (PAD), based on the gross autopsy findings; and

(ii) the final anatomical diagnosis (FAD), based on microscopic examinations; this takes precedence over the provisional anatomical diagnosis.

(c) Haematology reports and logbooks

Haematology reports include peripheral smears and bone marrow aspiration and/or biopsy results. The peripheral smears and the bone marrow aspiration reports and logbooks are kept separately.

In most hospitals, the haematology reports are filed separately from the surgical pathology reports. In some hospitals, however, these may be interfiled with the pathology reports. Make sure that they are all included in the case-finding.

Review of the peripheral smears will ensure collection of leukaemia and lymphoma cases which have not undergone bone marrow aspiration and/or biopsy.

We would like to stress that the registry personnel are not expected to review all complete blood count reports in each hospital since this is a

routine procedure done for many conditions other than cancer. Only the reports for patients who are suspected of or diagnosed with leukaemia and other haematological malignancies should be reviewed. There must be a mechanism for the laboratory to identify such cases. The laboratory may be requested to flag them for easier identification.

(d) Cytology reports

Review all cytology reports. All cases with a diagnosis of suspicious or fairly conclusive or positive for malignancy should be identified and included in the Case-finding List from cytology. A class III or 'suspicious' cytology report, however, is not diagnostic of cancer. Unless supported by a positive biopsy (as reported on a pathology report) or by a clinical impression of cancer these need not be included.

Classification systems for cytology vary between areas. The case-finder should familiarize himself/herself with the classification system used.

Some pathologists keep a written log in which they briefly record whether each specimen turned out to be positive or negative for malignant cells. If this is available, case collection will be easier since it will not then be necessary to review all the cytology reports.

(3) Radiotherapy records

Any written list of new patients undergoing radiotherapy should be reviewed and used as a case identification source. Almost all cases are cancer. This is the preferred method of case-finding in the radiotherapy department.

Radiotherapy personnel may send a radiation therapy summary to the registry. If this method is used for case identification, there should be a quality control mechanism to allow for checking of completeness as the summaries may not reach the registry for various reasons.

(4) Nuclear medicine records

Patients who are treated with radioisotope by the nuclear medicine personnel should be identified and listed since they are not seen in the radiotherapy department.

The nuclear medicine section also maintains a log of patients who underwent radioisotopic scans. This should be reviewed and used as a source for finding possible cases.

(5) Radiology, ultrasonography and computerized tomography records

The radiology department maintains a log of patients who underwent radiological examinations. This is chronologically arranged, based on the date of the examination. This logbook as well as the radiology reports should be reviewed to identify reportable cases.

The ultrasonography section as well as the computerized tomography section maintain their own logs of patients, similarly arranged. These should all be reviewed and used as a case identification source.

(6) Hospital tumour registry

A hospital tumour registry (HTR) is primarily oriented towards administrative concerns and patient treatment and as such collects data which are different from those of a population-based registry. It also collects data items which are of use to the population-based registry, and when available the hospital tumour registry is a very important source of information. To complete case-finding, the hospital tumour registry cases should be reviewed, matching them with the cases gathered from other data sources within the hospital and paying special attention to patient identification data items (name, age, sex, address, hospital case number), as well as diagnosis and basis of diagnosis. Reportable cases occurring among residents of the population-based cancer registry's catchment area (as well as those for cross referral to other registries) should be identified. Cases missed in the previous data sources should be included in the Case-finding List.

THE HOSPITAL TUMOUR REGISTRY SHOULD NOT BE USED AS THE ONLY SOURCE OF CASE IDENTIFICATION, as not all cases will be included. Cases not included in a hospital tumour registry are:

(a) "Pathology only" cases

These are cases in which the surgical or cytological specimens are sent in from an outside source (government or private physician, clinic, or hospital) to a given hospital's pathology

department for processing and interpretation. Since the cases are not seen in the given hospital and no medical record exists there, they will not be included in the hospital tumour registry. They should, however, be included in the population-based registry, if the patients' addresses are within the catchment area of the population-based registry. Patients with no address must also be included in the Case-finding List, so that they can be linked later with Case-finding Lists from other data sources.

(b) "Consult only" cases

These are of three types, namely:

(i) patients seen as out- or inpatients who are seeking a second opinion as to their condition or treatment;

(ii) a pathologist from one hospital may send slides to a pathologist in another hospital for opinion or consultation;

(iii) patients who are travelling or vacationing in an area away from home, are taken ill and seen in a given hospital briefly, may not be entered into the registry.

(c) "Tumour board only" cases

A case may be discussed by a multidisciplinary committee (tumour board) in a hospital while not being diagnosed or treated at that hospital and therefore the case may not be entered in that hospital's tumour registry. However, if the patient is a resident of the catchment area of the population-based registry, the case should be included in the Case-finding List.

3.1.4 Cases from other sources

(1) The death certificate

The quality of the certification of cause of death varies from one country to another, especially in developing countries. However, if death certification exists, a review of the death certificates within the catchment area of the registry must be carried out to ensure complete data collection. Death certificates may be reviewed, for example, at the office of the local civil registrar of the municipalities or cities covered by the registry. Photocopies or duplicates of the death certificates may be furnished by the registrars to the registry. Ideally the original death certificates should be reviewed whenever possible. Copies sent to the registry may sometimes get lost along the way. Cases where cancer is mentioned anywhere on the death certificate, either as an immediate, antecedent, underlying or contributory cause of death, should be identified and included in the registry.

(2) Other sources

The registry personnel should be aware of administrative structures, such as social security health coverage, or special programmes, e.g. screening, which could be used as a potential source of cases in the area. It is important that all possible sources of information are examined regularly.

3.2 Finding the information on the cases

After identifying all the cases with a reportable diagnosis in a given hospital, the cancer registry personnel are ready to abstract details from the medical records. This means reviewing the medical record, checking items such as address and diagnosis, and noting pertinent information. These details are recorded on a Registry Abstract Form (Figure 4), either at the back of the form or, if there is not enough space, on an extra sheet stapled to the Registry Abstract Form.

To be able to find the relevant information, the cancer registry personnel must be acquainted with the composition of a medical record and how it is organized. Some medical records or charts are very simple, with only a few pages; others may be extremely complex, with many reports or notes, often handwritten with varying degrees of legibility. Because of the difficulty in deciphering a physician's handwriting, it is imperative to master medical terminology to the best of one's ability, keeping in mind root words and the use of the medical dictionary. If necessary, the medical consultant of the registry should be approached for assistance. Although medical records in different hospitals may not be organized in the same manner, medical records have certain characteristics in common. Be familiar with these characteristics.

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Pasig, Metro Manila

GENERAL CASE-FINDING

Hospital:

Date started	Sources of case-finding	Date finished	Remarks
	Autopsy		
	Cytology		
	Surgical pathology		
	Haematology: Bone marrow		
	Peripheral smear		
	Oncology		
	Radiotherapy		
	Radiology		
	Ultrasonography		
	Computerized tomography		
	Nuclear medicine		
	Medical records: Inpatient		
	Outpatient		
	Hospital Tumour Registry		

Prepared by: **Date**

Figure 3. Example log/tracking system

Department of Health – Rizal Cancer Registry, Rizal Medical Center

Pasig, Metro Manila

Hospital: **Source:**

Year:

Prepared by: **Date**

POPULATION-BASED REGISTRY FORM 1				
(2)	PATIENT REGISTRY NO.			☐☐☐☐☐☐
(20)	MULTIPLE PRIMARIES			☐
	1 First primary			
	2 2nd primary			
	3 3rd primary etc.			
(79)	NAME OF HOSPITAL			☐☐
(14)	HOSPITAL CASE NO.			☐☐☐☐☐☐
(4)	NAME OF PATIENT	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐		
	Last name	First name	Middle name	
	FOR MARRIED WOMEN:	Maiden name		
		Husband		
(5)	Sex 1 Male	2 Female	9 Not stated	
(9)	MARITAL STATUS			
	1 Never married			
	2 Married			
	3 Widowed			
	4 Separated/divorced			
	9 NS			☐☐
(11)	AGE (at incidence date)			☐☐
(8)	PERMANENT ADDRESS (See separate code)*			
	YEARS (Actual number)			
	00 Less than 1 year			
	99 Not stated			
	CITY ADDRESS:			
(6)	DATE OF BIRTH			☐☐☐☐☐☐ Day Mo. Yr.
(11)	PLACE OF BIRTH (see separate code)*			☐☐
(54)	RACIAL GROUP (see separate code)* 0 Not stated 1 Stated		Information specifically stated	☐

* These data items are listed in the form of a 'dictionary' and assigned codes by the registry

Figure 4. Example of a registry abstract form

(54.2)	DIALECT GROUP	☐☐
(13)	INCIDENCE DATE	☐☐☐☐☐☐ Day Mo. Yr.
	MOST VALID BASIS OF DIAGNOSIS	☐
	NON-MICROSCOPIC	MICROSCOPIC
	1 Clinical only	5 Cytology
	2 Clinical investigations	6 Histology of metastasis
	3 Exploratory surgery/autopsy	7 Histology of primary
	4 Specific biochemical and/or immunological tests	8 Autopsy with concurrent or previous histology
(18)	PRIMARY SITE (TOPOGRAPHY)	☐☐☐☐
(19)	HISTOLOGICAL TYPE (MORPHOLOGY)	☐☐☐☐☐☐
(23)	FINAL DESCRIPTION OF EXTENT OF DISEASE (AFTER SURGERY/AUTOPSY)	
	1 In Situ 2 Localized 3 Direct extension 4 Regional lymph node involvement 5 3 + 4	6 Distant metastasis 8 Not applicable (for sites other than breast, lung & cervix & for cases diagnosed clinically) 9 Unknown ☐
(24)	PRESENT STATUS	☐
	1 Alive	
	2 Dead	
(26)	CAUSE OF DEATH	☐☐☐☐
	a.	
	b. or c	☐☐☐☐
(25)	DATE OF DEATH	Day Mo. Yr.
		☐☐☐☐☐☐
(27)	RESULT OF AUTOPSY	
	0 Unknown if autopsy done	6 Case found at autopsy ☐
	1 No autopsy	7 Diagnosis not confirmed
	2 No residual tumour	8 Autopsy done, result unknown
	3 Primary site revised	9 Not applicable
	4 Morphology revised	
	5 Diagnosis confirmed	
(83)	PLACE OF DEATH	
	Hospital	
	Home	
	SOURCE OF DATA	
	1 Hospital	☐☐
	2 Death certificate (LCR)	☐

Reported by ---------- Date of reporting

Figure 4 (contd)

3.2.1 The medical record: organization and composition

Each hospital has its own procedures for organizing a medical record. Most of the time, this is done by the medical records department. Usually, the record is organized by temporal sequence of events, the latest admission being located at the front. After the patient is discharged from the hospital, the attending physician prepares a narrative discharge summary of the diagnosis and treatment of the patient and this is inserted at the front of the medical record. This summary should be used as a guide to ensure that no reports have been overlooked. However, the cancer registry personnel should abstract directly from the actual reports in the patient's record and not from the discharge summary. Usually the medical record has a face or cover sheet (normally the first page) which contains the diagnosis on admission and the final diagnosis.

(1) Composition of a medical record

The following is a list of specific types of information contained in most medical records. The information will not necessarily appear in this order.

(a) Patient identification:

Full name

Hospital case number

Address and identification number (if any, e.g. social security number)

(b) Referral information:

Name

Address of referring physician/department of hospital where patient was previously seen

(c) Biographical information:

Sex

Age at diagnosis

Birthdate

Place of birth

Race/nationality/ethnic group

Dialect

Marital status

Occupation

(d) Medical history:

Chief complaint

History of the present illness:

Date of onset

Description of symptoms

Duration of symptoms

Previous medical history:

Previous illnesses and hospitalization (including date and place)

Previous diagnosis of this neoplasm

Previous treatment of this neoplasm

Family history: history of cancer in the family

Personal and social history: include medically relevant social history such as smoking, drinking, drug habits, exposures to carcinogens

(e) Physical examination (PE):

General survey (general description of patient by physician)

Head, eyes, ears, nose and sinuses, mouth and throat, neck

Chest and lungs

Heart and cardiovascular system

Breast

Abdomen

Lymph nodes

Pelvic examination

Rectal examination

Extremities

Neurological examination

(f) Provisional diagnosis (admitting impression)

(g) Special examinations:

Radiological examinations (diagnostic X-rays)

Electrocardiogram

Ultrasonography

Diagnostic nuclear examination (scans)

Computerized tomography (CT scans)

Laboratory examinations:

Haematological examinations

Blood chemistry examinations

Serology

Bacterial cultures

Urinalysis

Faecal examination

Tumour markers

(h) *Consultation/referral reports*

(i) *Endoscopic examinations*

(j) *Operative record:*

Procedure

Findings (location, size, extent of spread)

(k) *Pathology reports:*

Cytology and haematology

Tissue examinations:

Gross (description based on visual examination)

Microscopic (description based on histological examination)

Pathological diagnosis (determining the disease)

(l) *Final diagnosis*

The diagnosis made after all routine and special studies have been completed.

(m) *Treatment reports:*

Medication record (drugs and medications)

Radiation therapy

Chemotherapy

Hormone therapy

Immunotherapy

Physical therapy (physiotherapy)

(n) *Progress notes*

Day-to-day notes on the progress of the patient made by the attending physician.

(o) *Doctors' orders and notes*

(p) *Nurses' notes*

(q) *Discharge summary or case summary*

(r) *Follow–up reports:*

Progress notes added after the patient has been discharged from hospital:

(i) based on patient's return visits to the outpatient department,

(ii) based on replies to correspondence with the patient's physician, other tumour registrars, other medical facilities, the patient or his family.

(s) *Autopsy report:*

Provisional anatomical diagnosis (gross)

Final anatomical diagnosis (microscopic)

This information can be of particular value in indicating the primary site which may have been incorrectly diagnosed or unknown prior to autopsy.

(t) *Death certificate (when the patient dies in hospital or when the death certificate is obtained through follow–up)*

This may be the civil death certificate or the certificate completed by the hospital.

(2) *Forms used to record information in a medical record*

The following is a list of most forms, records, notes and summary sheets which may be found in a hospital's medical record. Their names are self–explanatory.

(a) ***List of forms with relevant information for completing the abstract:***

- Admission sheet
- Autopsy
  (necropsy or post-mortem report)
- Chemotherapy report
- Consultation report
  (request for opinion or aid from other physicians or departments)
- Cytology report
- Death certificate
- Diagnostic radiology (X–ray reports)
- Discharge (narrative) summary
- Doctor's order sheet/prescription sheet
- Doctor's progress notes
- Endoscopy report
- Haematology reports
- Laboratory reports
- Medical record data sheet (face or cover sheet)
- Medication record

- Nuclear medicine (diagnostic imaging/scans)
- Nuclear medicine report (radioisotope treatment report)
- Outpatient clinic record (Protocol study report)
- Pathology (histology) report
- Radiation therapy summary
- Referral letters (from local physicians and other institutions)

(b) ***List of forms not likely to contain relevant information for completing abstract:***

- Anaesthesia record
- Electrocardiogram report
- Electroencephalogram (ECG) report
- Emergency (accident) room report
- Graphic reports (temperature, pulse, respiration, blood pressure)
- Informed consent to treatment
- Intake–output chart (measured liquids)
- Nurses' notes
- Physical therapy report
- Recovery (post–anaesthesia room report)
- Request to blood bank
- Serology report

3.2.2 Abstracting the medical record

(1) What cases to abstract

(a) The reportable list: Each registry or registry system, in cooperation with the cancer committee, must develop a list of diagnoses to be included in the registry (for the reportable diagnoses which may be included in the list, see Section 3.1 and example list in Appendix 3.1).

Before abstracting a case of cancer, the clerk should check:

- Is the diagnosis reportable?
- When was the incidence date?
- Did the incidence date occur on or after the reference date of the registry (the date the registry began collecting data on cancer)?

If the case qualifies for registration, the patient's medical record should be abstracted.

Cases diagnosed as cancer by a physician, surgeon or dentist, even when not histologically confirmed, should be abstracted.

In the course of abstracting, one may encounter ambiguous or vague terminology describing a tumour, when its behaviour is uncertain. Refer to Section 3.1.3 for guidance.

(b) Multiple primaries: Since cancer patients can develop other cancers in their lifetime, multiple tumours occuring in the same patient may pose a problem in cancer registration.

- Is the new lesion another cancer occurring in the same individual?
- Is the new lesion an extension of the same cancer? Is it a metastasis?
- Is this a recurrence or new manifestation of a single cancer, probably following earlier treatment

In dealing with this problem, each registry may have its own definition. A simple set of recommended definitions for deciding whether more than one tumour in an individual are multiple primaries or not is given in Section 4.2.

For most multiple primary tumours, each unrelated cancer is abstracted on a separate form. The registry number for multiple neoplasms (see example abstract form, Figure 4) remains the same but a higher sequence number is assigned for each new primary cancer. The sequence number indicates the order in which a primary malignancy is discovered in relation to the total number of primaries for a given patient.

While it is ideal to abstract the medical record after the first course of therapy is completed and all the pertinent reports are filed, this may not be very practical for population–based registries in developing countries. Record keeping varies in different hospitals. Thus, for registries actively collecting data from several hospitals, it may be advisable to initiate abstracting as

soon as the chart (medical record) is available. However it may be necessary to review the patient's medical record at a later date to complete the abstract. All pertinent information gathered from the different data sources in the hospital should be incorporated in the abstract. While awaiting completion, the abstract may be kept in a 'suspense file' (holding or query file, see Chapter 5).

For patients who have died, it is necessary to incorporate the results of the autopsy (if there is one) to verify the diagnosis.

(2) *What information to abstract*

The items of information to be collected by a registry will depend on the function and scope of the registry, the availability of sources and the method of data collection. These items are usually incorporated in the Registry Abstract Form (see Figure 4).

(a) Personal identification: The cancer registry should have sufficient identifying information to ensure that an individual who has been registered previously will be recognized as the same person, should he or she be reported again to the registry. This is very important, and prevents multiple registration of the same case. The specific items that contribute to personal identification may vary from one country to another. Some countries use identification numbers or social security numbers while others do not. Useful items include name(s), date of birth and/or age and sex.

(b) Description of the tumour: This includes the anatomical site (topography) and the histology (morphology) including behaviour. Histological proof of diagnosis (pathology reports) is the the most valid basis for diagnosis and for the extent of the disease.

(c) Items of information which may be collected

(i) The person (see Section 3.3.1):

Identification:

Hospital case/record number
Personal identification number
Name(s)
Sex
Date of birth/age
Nationality
Ethnic group

Demographic and cultural:

Address
Place of birth
Marital status
Age at incidence date
Religion
Occupation

(ii) The tumour and its investigations:

Incidence date (see Section 3.3.2)
Most valid basis of diagnosis of cancer (see 3.3.3)
Method of first detection (see 3.3.4)
Primary site (topography) (see 3.3.5)
Histological type (morphology) (see 3.3.5)
Behaviour (see 3.3.5)
Pretreatment extent of disease (see 3.3.5)
Surgical/Pathological extent of disease (see 3.3.5)
Multiple primaries (see 3.3.5)
Site(s) of metastasis (see 3.3.6)

(iii) Treatment:

Initial treatment

(iv) Outcome/follow-up:

Date of last contact
Status at last contact
Date of death
Cause of death (ICD-9/ICD-10)
Place of death:

(v) Sources of information

Hospital	Date	Record number
Laboratory	Date	Record number
Primary care		Physician's name

3.3 Abstracting

The tumour registrar should be able to understand the events leading to the diagnosis of a malignancy, from the clinical history and physical examination to the various laboratory examinations and procedures undertaken to confirm the clinical impression and to determine the precise nature of the disease. Findings of these examinations will appear on pathology, cytology, X–ray, scan, endoscopic, operative or other laboratory reports, all of which are filed in the patient's medical record. Learn to recognize these relevant reports and how to abstract the diagnostic findings which form the basis of diagnosis of cancer. These are also important in determining the extent of disease.

Actual recording should be done directly onto the Registry Abstract Form, particularly the 'basis of diagnosis' and 'methods of detection'.

Definitions of the items of patient information to be collected by the cancer registry are given below, including their relevance, the problems that may be encountered and how to solve them. Although coding is an in–put procedure, the coding schemes as well as the recommended codes for these items are given in this section. Coding of neoplasms is a more complex matter and will be discussed further in the section on Coding (Chapter 4).

3.3.1 Patient identification

As a first step, a unique number must be assigned by the registry to the patient to permit subsequent identification of the case.

(1) Patient registry number (PRN)

A unique number assigned by the registry to each patient. This number is written on all documents and items of information relating to the patient. The first two digits of the PRN are usually those of the year the patient was registered. Example:

– 95 – 0001 is the PRN assigned to the first patient registered in 1995.

(2) Name

Whenever possible, give the full name of the patient, written down as follows: last name, first name, middle name or maiden name (name at birth). Very often, the middle or maiden name may be given only as an initial and should be so recorded. If the names of the parents are important and are given, include these in the abstract.

For male patients who are Sr., Jr., III, etc. indicate so following the last name. If it is known that the patient has a graduate professional degree (MD, DDS, etc.) indicate so after the last name. Example:

– de la Cruz, Jr., MD; Juan S.

Certain problems will be specific to differing local conditions. For example, in a Catholic country where monks and nuns may change their names and are called Father, Mother, Sister or Brother. In this example, the family name should be used if known, indicating the title Sister, Brother, Father, Mother and name given in religion after the last name. A cross-reference on the master patient index file is necessary to facilitate matching and to avoid duplication. Each registry should produce its own guidelines.

For married women who have taken the name of their husband, the family name of the husband should be used. As a check for this, the patient's maiden name (unmarried name or name at birth) should be indicated under the heading "Maiden name" and the husband's name under the heading "Husband". Cross–reference on the master patient index file whenever there are two names for a married woman.

(3) Identification number

Some countries use a personal identification number which is unique to an individual, e.g. the social security number in the USA, the national identity number in Malaysia and Singapore. If a unique personal identification number exists, this should be included in the patient's files. Abstract in detail the complete number, including any check digits when they exist.

(4) Hospital case number

Record the number assigned to the patient by the hospital admitting office. If the hospital has a unit numbering system, all patient records will carry this number. If the hospital has a serial numbering system, a new number is assigned on each admission to the hospital. If a patient has had several admissions, record the hospital number assigned to the patient at the time the malignancy was first diagnosed.

(5) Permanent address at time of diagnosis

Record the number, street, city or municipality, province and country of the patient's usual residence. This should be distinguished from the patient's temporary address at the time of admission, for example a patient from the country may come to the city for medical treatment and stay temporarily with friends or relatives. His/her address in the country is the permanent address and the address in the city is the temporary or city address. For example, in the Philippines, the permanent address is defined as the place where the patient has been residing for at least a year. The length of time used to define "usual residence" may vary from registry to registry and should be agreed upon in advance.If available, the time the patient has been living at said address should be indicated. Transient residents should not be included in studies of incidence and survival.

(6) Sex

Record whether male, female or not stated. If the sex is not recorded, this may be inferred from the given name and from the wording of the hospital summary. In very rare instances, the sex cannot be determined or there may have been a sex change. This information should be recorded.

(7) Age at incidence date

This refers to the age in years at the incidence date (the date of the first admission or consultation for the cancer in question – see Section 3.3.2 below). Record the patient's age on his/her last birthday; do not round off to the next birthday. If the birthdate is known, check whether the given age is correct or not.

(8) Birthdate

Record the day, month and year of the patient's birth. If the information is not known, record as unknown or not specified.

(9) Place of birth

Record the town and province or country where the patient was born. Place of birth may assist in personal identification. Codes used should conform with those used in local or national statistics institutions.

(10) Racial group

Indicate to which racial group the patient belongs, for example Caucasian, Mongolian, Filipino, Chinese, Japanese.

There may be some problems in classifying individuals of mixed heritage. Record all the details. When abbreviations are used in the medical record, be sure to know exactly what the abbreviations mean. For example:

- Fil. = Filipino.

(11) Dialect group or ethnic group

Record the regional dialect that the patient usually speaks or the ethnic group to which the patient belongs. Certain habits peculiar to specific dialect or ethnic groups may provide clues to cancer atiology. Recording this item would allow comparative studies on cancer incidence to be carried out between ethnic groups.

(12) Marital status

Record whether never married, married, widow/widower, separated/ divorced, or not specified. Do not assume that a person specified as Miss should be classified as single. Often women who have been separated or divorced use their maiden name. Patients with 'common law' marriages should be classified as married.

(13) Occupation and industry

Occupation refers to the kind of work done by an employed person, or, for persons who are retired or currently unemployed, the work carried out previously.

Industry refers to the activity of the establishment in which an economically active person works (or worked).

The Registry may use local coding schemes for occupation. This should allow for the following:

- self-employed individuals: note down their actual job and the corresponding industry
- retired persons: indicate the previous usual job and not the pre-retirement job, e.g. metal welder not night watchman
- married women (at home): note down their previous occupation if any and note down the husband's occupation
- students (full time education)
- members of the armed forces

Collecting information on occupation is frequently difficult for cancer registries. It may not be well recorded in the medical record. Death certificates may be a better source of information for this item.

Record the patient's usual or major occupation as well as industry in which the patient is currently or was previously employed. Also note a secondary occupation if one is indicated in the medical record. Data on occupation are particularly important in determining possible exposures to carcinogens.

(14) Religion

The collection of this item is optional depending on the number of religions, the feasibility of collection and relevance. Religion influences the attitudes of the patient towards acceptance or use of medical services or forms of treatment, for example Jehova's Witnesses are prohibited from receiving blood transfusions.

In a similar manner, religion may affect the patient's lifestyle and exposure to carcinogens, for example certain religions would prohibit eating meat.

3.3.2 Incidence date

Important: This date is used to define the 'anniversary' of a cancer, but unlike a birthday, is not the actual date when the cancer began. This is almost impossible to know, and it is even difficult to know when the cancer was first clearly recognized. It is better to have a reproducible date, readily recognized from the records. Usually, this is the date of first consultation at or admission to a hospital, clinic or institution for the cancer in question, which can be verified from the records. A registry may choose its own incidence date: the important thing is that it be clearly defined and consistently used. The following dates, in order of priority may be used:

(1) **Date of first consultation at, or admission to, a hospital, clinic or institution for the malignancy in question.** If the patient was admitted to a hospital, the incidence date should be the date of admission. If the patient was not admitted, the date of the first consultation for the condition should be the incidence date.

(2) **Date of first diagnosis** of the cancer made by a recognized medical practitioner or dentist. This does not refer to the date of histological confirmation.

(3) **Date of histological confirmation or date of the first pathology report** confirming the presence of cancer.

(4) **Date of death** when the cancer is first ascertained from the death certificate and follow-back attempts have not been successful ("Death Certificate Only" cases, see Section 3.3.3).

(5) **Date of death preceding an autopsy** when the cancer was first diagnosed at autopsy and was not suspected clinically.

If there is a delay between the first consultation and admission to a hospital, the date of first consultation is selected as the incidence date.

If the cancer is diagnosed while the patient is being treated for another condition, whether outpatient or inpatient, the

appropriate incidence date is this date of diagnosis.

Previously diagnosed tumours in persons who move into an area within the catchment area of a population–based registry are not included in computations of incidence.

3.3.3 The most valid basis of diagnosis

The method by which cancer in a patient is confirmed is a gauge of the reliability of the diagnosis. This information is therefore important in assessing the reliability of the data.

The most conclusive method is microscopic examination of tissues, also known as histological confirmation. This may be the initial histology of the primary site or post–mortem examination with concurrent or previous histology. The next most conclusive method of diagnosis is the microscopic analysis of cells, also known as cytological confirmation.

The basis of diagnosis distinguishes tumours which were examined microscopically from those which were not; cytological diagnoses are also distinguished from histological diagnoses, just as histology of the primary tumour is distinguished from histology of a metastatic lesion. Example:

- A biopsy of the lung on bronchoscopy is distinguished from a biopsy of a lymph node metastasis.

Although histological confirmation is the more conclusive method of diagnosis of cancer, cases diagnosed only on the basis of clinical or physical findings are also included in the registry. The medical records should be studied carefully to determine the different methods used to confirm the diagnosis of cancer. The most valid basis of diagnosis or the most conclusive method of confirmation should be noted down on the abstract. If additional information becomes available later, the most valid basis for diagnosis should be updated. Example:

- The record for a patient with an initial diagnosis of breast cancer by mammography would be updated if the diagnosis was later confirmed by histopathology.

The most valid basis of diagnosis should be updated as soon as information is available.

For coding, methods of diagnosis have been divided into two main groups, non–microscopic and microscopic, each consisting of four categories:

Non–microscopic

(1) Clinical only

This includes cases diagnosed by clinical methods such as history and physical examination, without specialized investigations;

(2) Clinical investigation

Diagnosis is arrived at with the aid of specialized examinations, but not confirmed by a positive histology or cytology, or by direct visualization. The examinations in this category include those in Section 2.2.1:

- diagnostic X–ray examinations of all types
- scans
- ultrasound
- thermography
- xeroradiography
- endoscopy

(3) Exploratory surgery/autopsy

This includes diagnoses made during surgical exploration, by direct visualization or palpation or gross autopsy, without any microscopic confirmation.

(4) Specific biochemical and/or immunological tests

Clinical diagnosis of cancer is based on laboratory tests or tumour markers which are clinically diagnostic for cancer (see Section 2.2.1). Examples are:

- Alpha foeto protein (AFP) for liver cancer.
- Beta–subunit of human chorionic gonadotropin (Beta–HCG) for choriocarcinoma.
- Abnormal electrophoretic spike for multiple myeloma.
- Acid phosphatase for prostatic cancer.
- Carcino–embryonic antigen (CEA) for gastrointestinal malignancies.

Microscopic

(5) Cytology or haematology

Cytology: microscopic diagnosis is based on examination of cells rather than tissues. Included in this category

are positive cytological examinations of sputum, cervical and vaginal smears, fine needle aspirations from the breast and other organs, bronchial brushings and washings, tracheal washings, prostatic secretions, gastric, spinal or peritoneal fluid, and urinary sediment. Diagnoses based on paraffin block specimens from concentrated spinal, pleural or peritoneal fluid are also included in this category.

Haematology: the study of cells of the blood or blood-forming tissues, especially the bone marrow, looking for changes in the structure and number of the various types of blood cells, including immature cells. This includes peripheral smears.

(Note: Bone marrow aspiration and/or biopsy findings in leukaemias are included under histology of primary.)

(6) Histology of metastasis

Microscopic diagnosis is based on a tissue specimen taken during biopsy/surgical resection from a secondary or metastatic site. For example:

- Biopsy of a cervical lymph node metastasis in the case of a nasopharyngeal carcinoma.

(7) Histology of primary

Microscopic diagnosis is based on a tissue specimen taken during biopsy/or surgical resection from the site of origin of the tumour (primary site). Examples are:

- Biopsy of the nasopharynx in nasopharyngeal carcinoma.
- Biopsy of the bone marrow in the case of acute lymphocytic leukemia.

(8) Autopsy with concurrent or previous histology

This includes autopsy findings with post-mortem histological diagnosis or cases with previous histological diagnosis confirmed at autopsy.

In the interpretation and subsequent coding of autopsy findings one must distinguish the following: (a) autopsy report with post-mortem histological diagnosis; (b) autopsy is gross only, histological examination carried out during life, and (c) the autopsy findings are not supported by any histological confirmation.

(9) Unknown

The basis for diagnosis of cancer is not specified and it is not known whether the case is microscopically confirmed or not. This includes cases undergoing radiotherapy in radiotherapy clinics, with very little or no information available on the method used to establish the diagnosis. It also includes cases diagnosed in other hospitals or institutions.

(10) Death certificate only

Cases registered for which the only available information on cancer was on a death certificate, and where follow-back attempts have been unsuccessful. This category does not include cases first coming to the registry's attention by means of a death certificate mentioning cancer (see Section 3.3.4) for which other bases of diagnosis became available.

In abstracting the most valid basis of diagnosis of cancer, always record the following basic information:

- the name of the examination or procedure,
- the date the examination or procedure was carried out, and
- the result of the examination or procedure, indicating the pertinent information; if the result is negative, this should be recorded (e.g., gastroscopy, 24 November 1986 – negative).

Record any procedure mentioned in the medical record, even if this was carried out in a previous hospitalization, if this is the basis for diagnosis. Record these at the back of the abstract. A section for notes or comments should be available for the summary of actual procedures.

3.3.4 Methods of first detection

The methods of first detection are the means by which the case has come to medical attention. The methods by which cancer

cases are detected in a population may influence incidence rates. Screening programmes, such as a cytology screening programme, may detect precancerous lesions which when treated early and adequately will no longer progress to invasive cancer. Autopsy examinations may discover that cancer was present in a patient who died of some other disease. These are called 'latent cancers', and if they are included in the statistics in the same way as cases found during the patient's lifetime, they can influence the 'incidence' of that cancer.

The percentage of cases which first comes to the attention of the registry through a death certificate mentioning cancer can be useful in assessing the adequacy of case-finding. This represents the percentage of cases which were missed during the initial case-finding and abstracting activities of the registry staff. For rapidly fatal diseases, the proportion may be quite high but for diseases with a longer duration it should be small.

The suggested codes are:

1 Screening examination
2 Incidental finding (on examination, at surgery)
3 Clinical presentation (with symptoms)
4 Autopsy (incidental finding at autopsy)
5 Death Certificates
8 Other
9 Unknown

3.3.5 Diagnosis (see also Section 3.3.9)

The most basic and most important item of medical information collected in a population-based registry is the diagnosis of cancer. As there are many types of cancer, statements used by physicians to describe a specific diagnosis will vary considerably, but will generally include two components: (1) the anatomical location of the tumour, also known as its site or topography, and (2) the appearance of the tumour when examined under microscope, also known as its histology or morphology.

The morphological terms on their own often indicate the tumour's behaviour. Examples are:

- Fibroma, which is a benign tumour.
- Sarcoma, always malignant in behaviour.
- Squamous cell carcinoma in situ of the cervix uteri, which is a complete diagnostic statement specifying the tumour's site (cervix uteri), its morphology (squamous cell carcinoma) and its behaviour (in situ).

The abstractor should carefully review all reports contained in the clinical record and note all details relating to the tumour's site and its morphology/behaviour.

The aim of a cancer registry is to register all new primary malignant tumours. For this reason it is important to identify the site in which the tumour originated. The primary site may at times be determined by a pathologist reviewing tissue from a secondary site. Example:

- It is possible to diagnose primary carcinoma of lung from excision and microscopic review of mediastinal lymph nodes.

It is also possible to deduce a primary site from the determination of a specific morphology. Example:

- A nodular melanoma of the neck indicates a malignancy of the skin of the neck.

It should be noted that sites such as 'head', 'thorax', 'limb', 'pelvis', 'abdomen' are poor descriptors of site, since a tumour may arise in a number of tissues (skin, soft tissue and bone) within these sites. For this reason, it is important to extract all the diagnostic information available in the record.

If there is no mention of the primary site in the record, but a secondary site(s) has been identified, note all available information regarding the secondary site(s). The information on the primary site may be added at a later date if it becomes available. Similarly if the histological diagnosis is stated using only non-specific terms such as 'malignant neoplasm', 'cancer' or 'malignant tumour', abstract these terms until more detailed information becomes available.

In abstracting histology, record the complete histological diagnosis as stated in the pathology report's Final Diagnosis. Do not modify the pathologist's final diagnosis by picking up descriptive terms found in the microscopic description of the tissue. Example:

- A final pathological diagnosis of adenocarcinoma may be described as mucin producing in the body of the report but the final abstracted morphological diagnosis remains adenocarcinoma.

If conflicting statements exist regarding the diagnosis, prefer statements from the pathology reports over other statements.

It is quite possible for one person to develop more than one primary tumour during his lifetime. (This is commonly called multiple primary and is discussed in detail in Chapter 4). If this is noted on the patient's medical record, then a separate abstract should be prepared for each new primary tumour.

In addition to a description of the site, and morphology/behaviour of a tumour, it is useful to assess the extent of involvement of the tumour throughout the body. This is tumour staging and is discussed in detail in Chapter 4.

Differentiation refers to the histological grading or the degree or extent to which neoplastic cells have the specific characteristics of a particular tissue or organ. Histological grading ranges from well differentiated to the anaplastic or undifferentiated type.

3.3.6 Sites of metastasis

Metastasis is the spread of tumour cells in a discontinuous fashion, from the primary site to other organs of the body, via the blood stream or through the lymphatic system.

This item is a low-priority item for population-based registries. However, for those who want to collect information on the site(s) of metastasis, a simple one digit code is suggested:

0	None	5	Brain
1	Distant lymph nodes	6	Ovary
2	Bone	7	Skin
3	Liver	8	Other
4	Lung/Pleura	9	Unknown

Several may be possible in the same patient and one can assign three or more per patient, in sequence; for example:

the first metastatic site was to a distant lymph node, the second metastatic site was to the lung, the third metastatic site was to the liver, the fourth metastatic site was brain.

This may be recorded as follows:

Site(s) of metastasis

1	4	3	5

The Registry personnel may record information on metastasis at the back of the abstract or in the space allocated for notes. This information may be gathered from the results of diagnostic procedures performed, from the operative record or from the pathological reports.

3.3.7 Treatment

Treatment is the therapy given by the reporting hospital, and/or other associated hospitals.

Definitive treatment is a specific therapy which modifies, controls, removes or destroys cancer tissues, both at the primary and at any metastatic sites. It is classified as definitive therapy even if it cannot be considered curative for a particular patient because of the extent of the disease, incompleteness of treatment or lack of apparent response.

Initial treatment describes the definitive cancer-directed therapy given to the patient and started within the first four months of diagnosis. This includes therapy given at the reporting hospital as well as those given in other facilities.

If so desired, for population-based registries data on treatment can be collected in broad categories such as groupings of the nature of the therapy. There should be a provision for identification of patients who did not receive the initial treatment since these are important in survival studies as well as in studies of the natural history of the disease. Give the possible reasons why the patient did not receive the initial treatment.

Categories of treatment:

Surgery: includes the surgical removal, totally or partially (except incisional biopsy) of tumour tissue of the primary or the metastatic site (including lymph nodes and endocrine glands).

Radiation therapy: external or beam radiation directed to cancer tissue regardless of the source of radiation.

This includes:

X-ray	Neutron beam
Cobalt	Helium ion
Linear accelerator	Spray radiation

Internal radiation: includes the internal use of radioactive isotopes whether given orally, intracavitarily, interstitially or by intravenous injection. Radioactive material such as radium, radon, radioactive gold, etc. can be given via implants, moulds, seeds, needles or applicators.

Chemotherapy: administration of drugs or chemicals to attack or treat cancer tissue. The cytotoxic effect does not result from a change in the hormone balance or in the host's immune response.

Endocrine or hormone therapy: use of any therapy which exercises its effect on cancer tissue through a change in the hormonal balance. This may be achieved through the use of hormones and antihormones or through ablative surgery or radiotherapy (oophorectomy, orchiectomy, hypophysectomy, etc.).

Immunotherapy: therapy which alters the immune system or changes the host response (defense mechanism) to the cancer. Another term for this is the use of biological response modifiers.

Other cancer-directed therapy

Suggested codes for treatment based on a grouping of the nature of therapy might be:

0 No treatment	4 Immunotherapy
1 Surgery	5 Hormonotherapy
2 Radiotherapy	8 Other relevant therapy
3 Chemotherapy	9 Unknown

Several treatments may have been given to a patient. Specify the dates when each therapy commenced and the hospital or institutions where these were given.
Instead of or in addition to the nature or type of treatment given, the registry may record the objectives or intended purpose of therapy.
A grouping of codes on the summary of the objectives of therapy might be:

1 Symptomatic only	5 Uncertain
2 Palliative	6 Other
3 Curative incomplete	7 No treatment
4 Curative complete	8 Unknown

These items are most relevant to hospital tumour registries. Population-based registries may collect them for specific research projects.

3.3.8 Follow-up items

Follow-up of patients after their initial diagnosis and treatment refers to their continuing to be seen by hospital or doctor. The registry may attempt to collect information about this follow-up process, although this is more usual for the hospital-based cancer registry than for the population-based registry. Follow-up may be active. This means that annually, or at agreed time intervals, requests from the registry are sent to the doctor responsible for information about the patient's status.
Passive follow-up means awaiting receipt of information from routine sources – particularly the death certificates of registered patients, showing that they have died.

(1) Date of last contact

Refers to the date at which the patient was last known to be alive. This may be obtained from follow-up visits to the hospital, by recording dates of follow-up at the hospital, contacting the patient's attending physician or the patients themselves. This date is

important if survival rates are to be calculated. If the patient is dead, the date of last contact would be the date of death. If it is not known whether the patient is alive or not, the date of last contact would be the date the patient was last seen in the hospital (outpatient or inpatient) or the latest information received from the patient's medical practitioner.

(2) Status at last contact

Population–based registries may only be able to obtain information on whether the patient is alive or dead. Active follow–up is an activity more characteristic of hospital tumour registries, which may also have information on whether the patient is alive with or without disease.

Suggested codes are:

1	Alive	3	Emigrated
2	Dead	4	Unknown

(3) Date of death

Give the complete date of death, including day, month and year, to facilitate tracing of information relating to the individual as well as tracing of the death certificates. This item is also important for survival studies as a measure of outcome.

(4) Cause of death

For recording the cause of death, there are two options:

- The registry may use the following codes:

1	Dead of cancer
2	Dead of other cause
3	Not known

- The registry may record the underlying cause of death as specified in the death certificate.

For coding the underlying cause of death, use the appropriate codes of the International Classification of Diseases (ICD–9 or ICD–10). The rules on the allocation of the underlying cause of death are often complex and may pose quite a problem in coding. If death certificates are obtained from, for example, vital or central statistics offices, these may already be coded according to the ICD.

(5) Place of death

Record whether the patient died in a hospital, at home or in a hospice, etc. The population–based registry can use this information in tracing back the case in the hospital where the patient died (in cases where the only information available is from the death certificate). This information may also be used as an indicator of certain aspects of medical care, e.g., a tendency to discharge terminal cases in order to diminish the number of deaths occurring in a hospital or clinic.

3.3.9 Diagnostic procedures

Below are general instructions to follow when abstracting diagnostic procedures, with the aim of determining the most valid basis of diagnosis, the extent of the disease (summary stage), the primary site of the tumour and its morphology and behaviour.

(1) The information to be recorded on the cancer

In each of the diagnostic procedures given one should record, whenever available, particular information on:

(a) The primary tumour

- its location within the primary organ (e.g. lung lobe, breast quadrant, etc.); record any mention of multiple tumours within the primary organ;
- the actual size of the lesion, noting down the dimensions (if given) and the units of measurement used in case of multiple tumours: record the size of the largest tumour;
- descriptions such as 'diffuse', 'entire circumference', and 'widespread'.

(b) The direct extension of the tumour

- pertinent information regarding invasion of adjacent structures and organs.

(c) Lymph nodes

- the specific location of the lymph node,

e.g. cervical – in the neck

axillary – in the axilla

inguinal – in the groin

- its laterality,

e.g. ipsilateral – same side as the tumour

contralateral – opposite side to the tumour

bilateral – both sides

- its actual size and number;
- record whether 'regional' or 'distant';
- record whether nodes are 'movable' or 'discrete', 'fixed', 'matted' or 'attached to deep structures';
- note down clinician's statement as to whether nodes are 'suspected of tumour involvement' or whether they are considered 'tumour free';
- for lymphomas and malignant tumours of lymphoid tissues (see Chapter 4), any mention of lymph nodes as 'enlarged', 'visible swelling' or 'palpable' is considered as involved and should be noted as such.

(d) Distant site involvement

- if distant metastasis is mentioned, record this.

(2) The information to be recorded on the diagnostic procedures

(a) History and physical examination (clinical only)

Review the history and physical examination described by the clinician and record the date(s) and the pertinent information as described above.

(b) X-rays, scans and other imaging techniques

Review the diagnostic reports of X-rays, scans, ultrasonography and other imaging techniques for mention of tumour involvement. Record the name of the procedure(s), the date(s) these procedures were done and the pertinent findings. Both positive and negative findings are required for determining the extent of the disease. For example, if a chest X-ray report is negative, record as 'negative' or '(–)'.

It is not necessary to copy details unrelated to cancer!

(c) Laboratory tests (blood chemistries, tumour markers, and haematological examinations)

Record the date(s), name of the procedure and result(s) of these tests or procedures in establishing the diagnosis of neoplasms or metastasis.

If no pertinent laboratory tests were done, state so in the abstract.

(d) Endoscopic examinations

Record all endoscopic procedures done in the diagnostic work-up prior to definitive therapy. Note pertinent findings, both positive and negative.

If biopsies are taken, locate the pathology report and abstract findings.

(e) Operative procedures

The exploratory surgery may be followed immediately by definitive surgery. In case the extent of the malignancy is such that resection of the tumour is not feasible, palliative procedures to relieve pain, distress or obstruction may be carried out (see Section 2.3). An example of a palliative procedure is a 'by-pass' operation. This involves the surgical formation of a connection (anastomosis) between two normally separate or unconnected (distinct) spaces or organs.

(f) Haematological examination

The registry personnel should take note of the suspected leukaemia cases and review the haematological reports, including the blood count (number of cells and percentage of the different types), peripheral smear and bone marrow examinations of these patients. In the presence of abnormally elevated white blood cell (WBC) counts, the WBC total number and differential (number of different types of white cell) counts should be recorded and the presence of immature cells should also be noted. In abstracting the peripheral smear report, record the name of the proce-

dure, date it was performed and the pertinent abnormal findings, particularly the presence of immature cells and the impression given by the haematologist.

It must be stressed that registry personnel are not expected to review all of the complete blood count reports in each hospital since this is a routine procedure done for very many conditions other than cancer. He or she should review only the reports for patients who are suspected of or diagnosed with leukaemia and other haematological malignancies. There must be an arrangement made with the haematology laboratory to identify these cases for the cancer registry.

(g) Cytological examination

Record the procedure performed and the source of specimen and date. Record the impression. Specify the highest class of cytological grade (I–V) from each. Note down information on possible primary site of suspected cancer (if available).

If there is more than one cytology report in the patient's medical record on the same type and source of specimen, record the findings on the first positive report. If the findings are based on different types and sources of specimens, summarize each pertinent report.

(h) Pathology reports

The histological examination offers the best information regarding the presence or absence of cancer. It may be made from a biopsy specimen, a surgical specimen or from an autopsy. There may be more than one pathology report in a patient's medical record. Each report should be summarized or abstracted, indicating the procedure, the date the procedure was done, the source of the specimen, the gross and microscopic pertinent findings (including negative as well as positive findings), and the slide number(s).

One possible procedure is to simply attach a copy of the pathological report to the registration document. Comonly a registry receives a copy of pathological reports mentioning cancer, from the Pathology Department of a hospital or from other pathology laboratories. These pathological reports are stapled to the registry abstract. This un-derlines the traditional importance of histopathology in the diagnosis of cancer.

In registries where abstracting of pathological reports has to be done actively, note the following:

Date of the report: This usually coincides with the date of the biopsy, not the date the slides were read nor the date of dictation.

The "gross description" of the report contains a description of the material received for examination. This will include the source of the specimen/ and the size of the tumour mass (if given). The size of the specimen or the size of the tissue fragments taken at biopsy are not important to the abstractor. The size of the tumour must be recorded.

The "microscopic description" of the report contains the pathologist's description of the specimen(s) examined. Note the total size of the tumour and its extent or the presence of metastasis. If there is a discrepancy between the microscopic and gross description of the excised tumour, the microscopic description takes precedence.

The 'diagnosis' section summarizes the microscopic findings of the specimen examined. It may confirm or deny gross findings of malignancy, giving the histological type of the malignancy and in certain cases, the grade of the tumour (or its degree of differentiation). Complete excision of the tumour may also be confirmed or denied by describing whether the lines of resection are free of cancer or are involved.

(i) The operative pathology report (surgical specimen)

The operative pathology report on the surgical specimen contains a description of the gross and microscopic examinations of the specimen. This report is very important to the tumour registrar since it determines the primary site of the tumour and gives or

describes the extent to which the tumour or malignancy had spread, and the organs or structures which are involved.

In abstracting the operative pathology report, record the following:

- date
- slide number
- specimen
- primary site
- tumour size: if there is more than one tumour, record the dimensions of the largest tumour
- histology: include the cell type and the tumour grade or differentiation (if given)
- extent of the disease within and beyond the primary site
- the pathologist's description of multiple tumours or multiple foci of tumour cells (multifocal or multicentric)
- direct extension of the tumour: record in detail the description of the primary tumour within the primary site including the depth of invasion
- direct extension of the tumour beyond the primary site
- the lymph nodes biopsied (regional or distant), indicating whether they are positive (involved) or negative (uninvolved), whether the nodes are fixed (perinodal extension of the tumour) or movable

Record any statement of laterality (homolateral or ipsilateral, contralateral or bilateral).

If given, record the number of positive nodes excised.

Record any and all sites of distant involvement.

(ii) The autopsy (necropsy) or post-mortem report

There are usually two types of reports made following autopsy:

- the Provisional Anatomical Diagnosis (PAD), based on the gross autopsy findings; and
- the Final Anatomical Diagnosis (FAD) based on microscopic examinations.

The final anatomical diagnosis (FAD) is the most important portion of the autopsy report as far as the abstractor is concerned. This usually gives the primary site, the histological type, the organs involved by direct extension or by metastases. All of the major organs are examined except in cases where the autopsy is restricted to certain organs. All pertinent findings should be recorded.

The autopsy findings should confirm the diagnosis of cancer made clinically prior to the patient's death or determine the primary site of a tumour which was incorrectly diagnosed or not known prior to death. If there is a discrepancy between the autopsy report and other previous pathology reports regarding histological type and primary site, the autopsy takes precedence.

In instances where the presence of cancer is incidentally discovered at the time of autopsy, review the history and physical findings to rule out a clinical diagnosis of cancer prior to death. If the diagnosis of cancer is first made at autopsy, the case should be abstracted and the method of first detection (Section 3.3.4) recorded as "diagnosed at autopsy". The date of diagnosis (Section 3.3.2) is the date of death.

If the diagnosis of cancer on autopsy is based on gross examination alone (PAD), this should be noted in the abstract. In this case, however, try to check with the pathology department whether a histological examination of the tissues removed from the body was done, since this is performed routinely.

3.3.10 Death certificates

If the registry has access to death certificates, then any certificate which mentions cancer as immediate, antecedent, underlying or contributory cause of death should be abstracted. A sample Death Certificate Abstract Form is given in Figure 5.

Department of Health – Rizal Cancer Registry, Rizal Medical Center
Pasig, Metro Manila

ABSTRACT OF DEATH CERTIFICATE					
PATIENT REGISTRY NO. ☐☐☐☐☐☐					
(1)	NAME OF PATIENT ________ (Last name First name Middle name)				
(5)	Sex ☐ 1 Male	2 Female	3 Age		
(4)	Civil Status	1 Single 2 Married	3 Widowed 4 Others		
(5)	NATIONALITY				
(6)	Usual Residence				
(7)	Usual Occupation				
(8)	DATE OF DEATH ☐☐☐☐☐☐				
(9)	PLACE OF DEATH	1 House			
		2 Hospital			
		Name of Hospital Address			
(10)	Surviving Spouse				
(11)	I. Disease or condition directly leading to death:				
	Immediate cause:	a.			
	Antecedent cause:	b.			
	Underlying cause:	c.			
	II. Other significant conditions contributing to death:				
(13)	Medical Attendance		With Without		
(14)	Certificate Correct by:		Private Physician		
			Public Health Officer		
			Hospital Authorities		
	Autopsy		Done Not Done Unknown	Diagnosis	

ABSTRACTED BY: _

Date: _

Figure 5. Example of a death certificate abstract form

The completed abstracts are matched with the registry's index files to determine if they have been registered previously (see Chapter 5). Cases which have not been registered previously are traced back whenever possible to the hospital where the patient died or to the physician who signed the death certificate. They may also be matched with the Case-finding Lists from the different hospital data sources to determine if they were seen previously in a hospital and were missed on initial case-finding. If this is so, the case should be traced back to the appropriate hospital. Cases which could not be traced back or for whom no clinical or laboratory records could be found, may be registered under the "death certificate only" (DCO) category (basis of diagnosis). In the first few years of operation of the cancer registry, this is usually high since some cases diagnosed previous to the registry's reference date (prevalent cases) may be included erroneously. The number of these cases will decrease after a few years. The percentage of DCO cases is a measure of the completeness of cover (see Chapter 6).

(1) Composition of the death certificate

(a) Patient identification information:

name (last name, first name, and middle or maiden name)
sex
age
date of birth
address (place of residence)
civil status
race
occupation

(b) Information on patient's death:

place of death
date of death
causes of death:
immediate cause
antecedent cause
underlying cause
contributory cause

(c) Certified correct by:

private physician
public health officer
hospital authorities

Note: For DCO cases, be very careful to register the place of residence and not the place of death of the case.

(2) Coding the underlying cause of death

The underlying cause of death is defined as:

- the disease or injury which initiated the train of morbid events leading directly to death, or
- the circumstances of the accident or violence which produced the fatal injury.

For consistency, the World Health Assembly recommended a standard form of medical certification (Figure 6) designed to facilitate reporting of the underlying cause of death, as well as gathering of information on the sequence of events leading to the patient's death.

In Part I, the cause leading directly to death should be reported on line (a), the intervening antecedent condition (if any) on line (b) and the underlying cause of death on line (c). If the entry on line (a) or on lines (a) and (b) completely describe the sequence of events leading to death, then it is no longer necessary to put an entry on line (c).

Part II is for any condition which may contribute to death but is not related to the disease or condition causing the death.

The purpose of the definition of the underlying cause of death is to ensure that all relevant information is recorded and that the certifier does not select some conditions for entry and ignore others. The underlying cause of death is the main axis for the tabulation of mortality statistics.

Registry clerks will normally have to accept what is already entered. They should know that there are rules for selecting the 'underlying cause', but they will not be expected to do this (see ICD–9, Vol. 1, pp. 699–737 or ICD–10, Volume 2, pp 30–123).

Figure 6. International Form of Medical Certificate of Cause of Death

Cause of death		Approximate interval between onset and death
I Disease or condition directly leading to death* ***Antecedent causes*** Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(a) ..... due to (or as a consequence of) (b) ..... due to (or as a consequence of) (c) ..... due to (or as a consequence of) (d)	....
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	....	
This does not mean the mode of dying, e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.		

EXERCISES

Question 3(a)

On the following pages are 11 examples of reports from radiology, nuclear medicine and CT scan. Given the general instructions above, abstract the relevant information and compare with the suggested method of abstracting, which follows the examples.

Example A.

LUNG CENTER OF THE PHILIPPINES Q.C. RADIOLOGY DEPARTMENT			
Hosp. case No. 96–29–87	Date: 23 March 1987		
Patient: COSTALES, Esperanza	Age: 53	Sex: F	Status: M
Examination requested: Chest X–ray			
Requesting physician: Dr Paul Moon			

RADIOLOGICAL REPORT	
Chest X–ray showed scattered small nodular densities on both lung fields, more on the bases.	
Heart, diaphragm and sinuses unremarkable.	
IMPRESSION: pulmonary metastases	
	Dr E.X. Ray Radiologist

Example B.

X-ray series: an X-ray examination which requires the taking of a number of pictures, summarized in one report.

This example is an illustration of an X-ray report of a metastatic series. Abstract what you think is pertinent in the report and compare with the abstract suggested.

Plate No. 969238	Date examined: 12 March 1987		
Case No. 11-22-99	Date reported: 12 March 1987		
Pay X Charity ___ Out ___	Requested by O.S. Zeus, M.D.		
Examination requested: skeletal survey			
Patient: Fanny BONE	Age: 52	Sex: F	Status: M

RADIOLOGICAL REPORT		
Skeletal survey dated 12 March 1987 shows sclerotic changes involving several vertebral bodies with lytic lesions at T-10 and T-11, sclerosis at both femoral heads and neck and body of the right ilium; lytic lesions at both pubic bones with pathological fracture at the left; mixed lesions at the ascending ramus of the left ischium.		
Remarks: Consistent with osseous metastases		
		B.B. Bonnin, M.D. Radiologist

Example C.

Some of the radiological examinations using contrast media are:

- Angiography: radiological study of the vascular system
- Bronchography: radiological study of the bronchi of the lung
- Cholecystography: radiological study of the functions of the gallbladder and bile ducts after introduction of an opaque medium
- Cholangiography: radiological study of the bile ducts
- Lower GI series or Barium enema: X–ray studies of the large intestines
- Sialography: radiological study of the salivary ducts
- Urography: radiological study of the urinary tract, using contrast media

This example is an Upper GI series (UGIS) report. Abstract the pertinent information and compare with the abstract suggested.

RADIOLOGICAL REPORT			
Plate No. B–95693	Date examined: 25 March 1990		
Case No. 30–30–26	Date reported: 28 March 1990		
Pay ___ Charity X Out ___	Requested by: G.P. Andres, M.D		
Name: IMPORTANTE Salud S	Age: 57	Sex: F	Status: W
Address: No. 2 Shaw Blvd., Pasig, MMLA			
Type of examination: Upper GI series			
Scout film: There is a mass density on the left upper quadrant. There are no abnormal calcifications. No extraluminal air noted.			
Upper GI series: Serial examination after ingestion of contrast medium shows normal oesophagus. The stomach is moderately distended with mucosal irregularities noted on the antral area. There is minimal contrast medium noted distal to the gastric antrum.			
IMP: Partial gastric outlet obstruction Consider: malignancy			
	Esto Mack, M.D. Radiologist		

Example D.

This is an illustration of a urogram report. Abstract the pertinent information and compare with the suggested abstract.

Plate No. 76137	Date examined: 5 October 1986		
No. 11–39–44	Date reported: 8 October 1986		
Pay ___ Charity X Out ___	Requested by: R.T. Pascua, M.D.		
Name: Felix NAVIDAD	Age: 46	Sex: M	Status: M
Address: Ermita, Manila			
Type of examination: KUB–IVP			

REPORT		
Scout film: There is a soft tissue mass density in the left hemiabdomen, obliterating the left psoas shadow. There is no evidence of calcific density in the urinary tract.		
Intravenous pyelography: Serial examination after introduction of contrast material shows prompt opacification of the right collecting system and kidney which appears slightly enlarged. The right ureter and urinary bladder are unremarkable. The left collecting system and kidney were not visualized even in the four hour delayed film.		
IMP: Non–visualized left kidney Retroperitoneal mass, left, probably arising from the left kidney		
		Chris T. Mass, M.D. Radiologist

Note:

KUB refers to plain film of the kidney, ureter and bladder – also called scout film
IVP refers to intravenous pyelography

Example E.

This example is an illustration of an ultrasound report. Abstract the pertinent informationand compare with the suggested abstract.

Case No. 2265	Date: 16 February 1988		
Name: Susan AMARILLO	Requesting physician: I. Brown, MD		
Address: Binangonan, Rizal	Age: 44	Sex: F	Status: S

ULTRASOUND REPORT		
The liver is enlarged showing inhomogenous echo pattern. There is a solid mass noted in the superior aspect of the right lobe measuring 5.0 x 5.6 cm. Another sonolucent nodule is noted in the inferior aspect of the right lobe.		
There are no dilated intrahepatic ducts.		
The gallbladder is unremarkable.		
IMP: Hepatomegaly with multiple intrahepatic nodules Consider: Metastasis		
		B.B. Echo, M.D. Ultrasonologist

Example F.

This is a typical CT scan report. Abstract the pertinent information and compare with the suggested abstract.

Name: Paraiso, Antoinette	Age: 79	Sex: F	Room No. 103
Hosp. No. 123456			
Referring physician: Dr S.M. Rosas			RMC
CT No. 25435X	In ___ Out ___		

CONSULTATION REPORT		
C.T scan of the abdomen shows a poorly defined heterogeneous mass density in the retrogastric area that appears to arise from the pancreatic neck and body. This measures approximately 4.8 x 3.2 cm. There is no calcification nor focal cyst formation.		
The pancreatic head and tail appear normal.		
Visualized inferior vena cava and abdominal aorta as well as the retroperitoneal lymph nodes are not remarkable. Liver is relatively small and shows some surface nodularities; there is a moderate perihepatic and perisplenic ascites. The left adrenal gland is prominent but still tri-radiate in configuration, appearing homogeneous without mass effect. Right adrenal is completely normal.		
Both kidneys function well and reveal no structural abnormalities. The pelvi-calyceal system and ureters have normal course and configuration.		
There are small calcifications in the region of the splenic flexure in the upper abdomen, presumably from previous colonic contrast material.		
There are circumferential calcifications throughout the abdominal aorta without focal aneurysm formation.		
IMP: Moderate ascites and relatively small liver. There is also suggestion of a tumour mass density in the pancreatic neck – retrogastric region and body, measuring approximately 4.8 x 3.2 cm.		
Percutaneous C.T. guided aspiration biopsy of pancreas, under local anaesthesia recommended.		
		Flora Doria, M.D.

Example G.

Diagnostic nuclear medicine examination

In nuclear medicine, radioactive substances known as radioisotopes are administered to patients in order to diagnose disease. A radioactive isotope emits gamma rays within the body, enabling the physician to visualize internal abnormalities.

This is an example of a nuclear medicine report. Abstract the pertinent information and compare with suggested abstraction.

LUNG CENTER OF THE PHILIPPINES DEPARTMENT OF RADIOLOGY CONSULTATION REPORT			
Name: BRAZO, Mercedes	Age: 34	Sex: F	Status: S
Physician: U.R. Sweet, M.D			
Date: 12 April 1987	Pay X Charity ___		

BONE SCAN 20 mci Tc– 99 Pertechnetate		
Anterior and posterior whole body scans by section were obtained after three hours from the injection of radionuclide.		
Multiple retentions are noted in the skull, right humerus and right pubis.		
The rest of visualized skeleton appears symmetrical and uniform.		
IMP: Abnormal bone scan, as above described Suspect metastatic disease		
		C.S. Brown, M.D. Radiologist

Example H.

RADIOLOGY DEPARTMENT			
Serial No. Q–8902	Date: 5 December 1988		
Name: Dahlia FLORES	Age: 64	Sex: F	Status: M
Xay examination: Chest, lumbo–sacral spine, APL			
Requested by: I.N. Bloom, M.D.			

RADIOLOGICAL REPORT		
Findings: Chest: confluent densities noted in the right upper lobe.		
The rest of the lung fields are clear. Aortic knob is atheromatous. Heart and diaphragm appear normal. The right breast is absent.		
Lumbo–sacral spine: Osteoblastic and lytic changes noted in both proximal femur, pelvic as well as lumbar vertebral bodies. The pedicles of the L2 vertebral body are ill–defined. Disc spaces are preserved. The normal curvature is maintained.		
IMP: 1. Status post–mastectomy, right 2. PTB, minimal, activity undetermined 3. Osseous metastases		
		A. Garland, M.D. Radiologist

Example I.

X–ray No. 89–1736	Date: 18 January 1988		
Name: YUSI, Ma. Magdalena	Sex: F	Age: 72	Status: M
Attending physician: Lucas, U.R., M.D	Room/Bed No.: OP		
Radiological findings: MAMMOGRAPHY Examination of the left breast reveals no evidence of nipple retraction. No discrete mass lesions nor localizing calcifications. No normal mass noted. Skin and subcutaneous tissue were unremarkable. IMP: Essentially normal left breast.			
		N.V. Benigno, M.D. Radiologist	

Example J.

X–ray No. B–107114	Date: 15 January 1988		
Naime: Eric ALBA	Hosp. case No. 04–07–38	Age: 3	Sex: M
Attending physician: Dr Chekup			
Examination: X–ray, chest and abdomen			

RADIOLOGICAL REPORT		
IMP: Pulmonary nodules suggestive of pulmonary metastases.		
Chest X-ray: There are nodular and patchy infiltrates in both lung fields. The heart is not enlarged. Diagraphm and sinuses are intact. IMP: Pulmonary nodules suggestive of pulmonary metastases.		
Abdomen: There is a huge soft tissue density in the right hemiabdomen displacing the intestines upward and to the right. There are no calcifications. No evidence of extra–luminal air noted. The intestinal gas pattern is non–obstructive. IMP: Intra-abdominal mass Considerations: (1) Wilms' tumour (2) Neuroblastoma		
		X.R. Ray, M.D. Radiologist

Example K.

Name: TREMOR, Rogelio S.	Age: 44	Sex: M	Room No. 145
Hospital No. 10–02–10	Date: 27 November 1988		
Ref. physician: Dr B. Steddy	X In ___Out CT No. 39038		

CONSULTATION REPORT

C.T. scan of the head shows a solitary 5.6 x 3.8 cm cystic and solid tumour mass lesion in the left parieto–occipital region with a moderate amount of perifocal oedema and mass effect.

There is also indication of some haemorrhage within the tumour mass.

The midline is shifted slightly to the right side with a right sided subfalcial herniation.

The lateral ventricles are slightly dilated, with partial medial compression of the left segments.

The septum pellucidum is likewise displaced to the right. The brainstem appears slightly full but otherwise shows no evident tumour mass lesion.

The petromastoids are unremarkable.

IMP: Solitary 5.6 x 3.8 cm solid and cystic tumour mass lesion in the left parieto–occipital region presumably a gliomatous neoplastic growth.

		Cere B. Room, M.D.

Answers to Question 3(a)

The examples can be abstracted as follows

A.	23/03/87	CXR: scattered small nodular densities, both LF, more on bases IMP: Pulmonary metastases
B.	12/03/87	Skeletal survey: lytic lesions T–10 and T–11, both pubic bones, with pathologic fracture, (L); mixed lesions, ascending ramus, (L) ischium IMP: Osseous metastases
C.	25/03/88	UGIS: Mass density, LUQ Stomach mod. distended: (+) mucosal irregularities, antral area Oesophagus (–) IMP: Partial gastric outlet obstruction Malignancy considered
D.	05/10/86	KUB–IVP: Soft tissue mass density, (L) hemiabdomen Non–visualizing left kidney IMP: Retroperitoneal mass (L) probably arising from (L) kidney
E.	16/02/88	Ultrasound, liver: Solid mass 5.0 x 5.6 cm, sup. asp. (R) lobe, sonolucent nodule, inf. asp. (R) lobe, liver IMP: Hepatomegaly with multiple intrahepatic nodules. Metastasis considered
F.	04/11/87	CT scan. Abdomen: Heterogeneous mass density, 4.8 x 3.2 cm., pancreatic neck and body (retro–gastric area). IVC and abdominal aorta, retroperitoneal LN (–). Moderate ascites; relatively small liver
G.	12/04/87	Bone scan: Abnormal bone scan, skull, (R) humerus, (R) pubis IMP: Suspect metastatic disease
H.	05/10/88	X–ray, chest and L–S spine s/p mastectomy, (R) Osseous metastases, femur, pelvic and lunbar vertebrae
I.	18/01/88	Mammography, (L): Neg
J.	15/01/88	X–ray, chest and abdomen Pulmonary nodules, suggestive of metastases Mass, (R) hemiabdomen, consider: – Wilms' tumour – Neuroblastoma
K.	27/11/88	CT scan, head Solitary 5.6 x 3.8 cm tumour mass lesion, (L) parieto–occipital region, presumably gliomatous tumour

Question 3(b)

The following are two samples of endoscopy reports. Abstract what you think is relevant and compare with the suggested abstract which follow this exercise.

Example L.

DEPARTMENT OF HEALTH – RIZAL MEDICAL CENTER, Pasig, Metro Mla. GIT – LIVER STUDY UNIT PANENDOSCOPY			
Patient: NINA BONITA	Date: 10 July 1987		
Address: 673 Boni. Ave., Mandaluyong, MMLA Ward:		OPD Hosp. No. 22-01-00	
Referred by: Dr. P.O. Gee	Sex: F	Age: 46	
Recent alcohol intake: None Amount:			
Recent drug intake: None			
Recent gross haemorrhage: None Amount: _____ Date:			
Previous endoscopies: None Date:			
History: Started 3 years PTC as burning epigastric pain, slightly relieved by intake of antacids			
Diagnosis: Peptic ulcer disease			
X-ray findings:			
Pre-medications: Phenergan 50 mg IM Xylocaine Spray			
Findings: Oesophagus: Essentially Normal (E/N) C-E Junction: E/N Fundus: E/N Body: Anterior E/N Posterior: E/N Antrum: Eroded mucosa, distal half antrum Pyloric Ring: Enlarged Duodenal bulb: not visualized Duodenum: not visualized Biopsy no. 6			
Endoscopic diagnosis: Gastric CA, Pylorus, Antrum Outlet Obstruction			
Recommendations: Refer to Surgery		ESTO MACK, M.D., Endoscopist	

Example M.

Name of Patient: PROCTER, ANNIE	Date: 21 April 1987		
Address: Makati MMLA.Ward: OPD			
Hospital No.: 32/79–46	Status: Married	Sex: F	Age: 39
Referred by: Dr C.S. Long			
History: Bloody stools noted on and off 3 months PTC, irregular bowel movement.			
Rectal Examination: (+) mass 6 cm from the anal verge annular, constricting the rectal lumen			
Proctoscopy: Distance Scoped: 6 cm. Mucosa: congested Blood X Mucus X (moderate) Stools: Watery			
Endoscopic findings: Scope inserted up to 6 cm. with ease Fungating, annular mass noted 6 cm. from anal verge, almost completely obstructing lumen. Scope could not pass beyond 6 cm.			
Endoscopic Diagnosis: Rectal CA			
Disposition: Multiple biopsy			
		Examined by: NAT B. NINE, M.D.	

Answers to Question 3(b)

The findings in this exercise can be summarized on the Tumour Registry Abstract as follows:

L.	10/07/87	Gastroscopy: Eroded mucosa, distal half antrum; Pyloric ring enlarged; Multiple Bx taken.
		Impression: Gastric CA, Pyloric Antrum Pyloric Outlet Obstruction
M.	21/04/87	Proctoscopy: Fungating mass 6 cm. from anal verge, almost completely obstructing the rectal lumen. Multiple biopsy taken Endoscopic DX: Rectal CA

Question 3(c)

The following exercises are examples of biopsy reports. Abstract the pertinent findings and compare with the suggested abstracts which follow the four examples.

Remember to note down:	the date of the report the slide number source of specimen primary site tumour size histological diagnosis (and differentiation if given)

Example N.

SURGICAL PATHOLOGY – CONSULTATION REPORT			
NAME OF PATIENT: SY, CLAIRE	SP NO: S–86–2607	SEX: F	AGE: 44
Attending Physician: Med I.Co	Hospital: Morong General Hospital		
Examination Desired: Frozen Section (X) Histopath ( ) Others Specimen: Breast mass, left		Date: 29 September 1986	
HISTOPATHOLOGICAL DIAGNOSIS:			
INVASIVE DUCTAL CARCINOMA, BREAST MASS, LEFT			
GROSS/MICROSCOPIC DESCRIPTIONS:			
Specimen consists of grayish–white mass measuring 3.4 x 3 x 2 cm. Cut section shows an irregular margin and firm cut sections. Entire specimen submitted.			
Microsections disclose a malignant tumour consisting of polygonal neoplastic cells with pleomorphic and hyperchromatic nuclei arranged in cords, clusters and glands invading the surrounding fibrofatty tissues.			
		B.R. EAST, M.D. PATHOLOGIST	

O. and P. are other examples of pathological reports. Abstract the pertinent information and compare with the suggested abstract.

Example O.

Name: Ofelia Ramos	Status: M	Age: 39	Sex: F

Path No. S–87–2447	Address: Pasig, MMLA	
Nationality: Filipino	Case No. 41–91	Ward: Surgical
Surgeon: D.R. Medic, M.D.		
Clinical Summary: Condition started 4 months PTA when patient noticed a mass on the right breast. Biopsy done 2 months PTA showed invasive ductal CA, right breast. Pre–operative Diagnosis: Invasive ductal carcinoma, right breast, Stage III Specimen: Right breast and axillary tissues. Operation: Modified Radical Mastectomy, right		
Date Received: 18/06/87	Date Reported: 26/06/87	

PATHOLOGICAL REPORT

GROSS DESCRIPTION:

The specimen consists of the right breast with its axillary tail weighing 500 gms. The breast measures 16 x 10 cms. and is covered with a 12.5 x 6 cm. ellipse of skin showing a 2.5 cm. previous biopsy site at the upper outer quadrant. The 1x1 cm. nipple is unremarkable but the areola shows an area of dimpling at 6.00 o'clock. Serial inferior sections reveal a 6 x 6 cm. mass. Cut section shows chalky strips and yellowish fat–like areas occupying the right upper and lower quadrants. The axillary tail measures 9 x 8 cm.

A – nipple, Block 2	E – upper inner quadrant, Block 1
B – previous biopsy site, Block 1	F – lower inner quadrant, Block 1
C – upper outer quadrant, Block 1	G – Lower level, Block 20
D – lower outer quadrant, Block 1	H – upper level, Block 2

MICROSCOPIC SECTIONS:

Microsections from the right lower outer quadrant (D) reveal sheets of breast tissues with neoplastic glands displaying pleomorphic hyperchromatic nuclei, prominent and moderate eosinophilic cytoplasm. These glands show cribriform pattern with central necrosis and areas of calcification.

Microsections of the previous biopsy site(B) shows no residual but numerous foreign body giant cells are seen.

Microsections from the other quadrants (CEF)and the nipple are unremarkable. A total of twenty two(22) axillary lymph nodes are isolated, all are negative for metastases and show sinus histiocytosis.

DIAGNOSIS: S/P modified radical mastectomy, right invasive ductal carcinoma, right breast
0/22 Axillary lymph nodes positive for metastases

Examined by: RESS I. DENT, M.D.	Reviewed by: PAT O. LOGIST, M.D.

Example P.

LABORATORY SERVICE			
Name: PEDRO I. AMSIC	Sex:Male	Age: 53	Status: M
Path No. S—88–2889	Nationality: Filipino		
Address: Pakil, laguna	Case No. 33–22–11		
Service: SURGERY	Physician: Dr. Al Wright		
Clinical Summary: Started 6 months PTA as seizure associated with loss of consciousness. About five other episodes occured in a span of five months. CT scan, brain, revealed a left superior frontal cortical mass lesion. Pre–operative Diagnosis: Left superior frontal mass lesion.			
Date Received: August 17 1988	Date Reported: Aug. 25, 1988		

PATHOLOGICAL REPORT	
GROSS DESCRIPTION: The specimen consists of a piece of 5 x 4 x 3 cm brain–like soft tissue.	
MICROSCOPIC: Microsections disclose brain tissue with pleomorphic and bizarre–looking cells with enlarged, irregular nuclei, some of which are vesicular and with moderate amount of eosinophilic cytoplasm. There are some multinucleated giant cells; mitotic figures noted with areas of necrosis surrounded by neoplastic cells. The blood vessels are increased in number and dilated.	
DIAGNOSIS: ASTROCYTOMA, GRADE III	
Examined by: PATO RESSI DENT, M.D	Reviewed by: CERE B.RUM, M.D.

Example Q.
This is an example of an autopsy report. Abstract the pertinent findings and compare with the suggested abstract.

Autopsy No.: A–87–70

NECROPSY REPORT			
Name: FELIX CARGADOR	Age: 27		
Address: Nava St., Sta. Mesa, Mla			
Date Admitted: 16 December 1987	Date died: 20 December 1987		
Date Autopsied: 20 December 1987	Ward: Medicine		
TRUNK ONLY: Prosector: Ressie Dente, M.D.	Consultant: Pat. O. Loggie, M.D		
Clinical Impression: HEPATIC ENCEPHALOPATHY FULMINANT HEPATITIS R/O LAENNEC'S CIRRHOSIS			

CASE SUMMARY:
F.C. 27 years old, male, married, presently residing at 45 Nava St., Sta Mesa, Manila, was admitted to the R.M.C. for the second time on December 16, 1987, with a chief complaint of epigastric and back pains.
The present illness started about a month prior to admission as abdominal pain, localized at the epigastric area, moderately severe, radiating to the back, persistent, slightly relieved by intake of analgesics. Pain was associated with sensation of fullness of the abdomen and yellowish discoloration of the skin and sclerae. He consulted a private physician and was diagnosed as a case of amoebiasis. He was given antibiotics but these did not afford any relief. The signs and symptoms persisted so an abdominal ultrasound was requested. Result of the procedure was not known to the patient. A week prior to admission, he developed pedal oedema. He consulted a government hospital and was subsequently referred to R.M.C. for admission
Pertinent P.E. findings (on admission): General Survey: conscious, coherent, fairly nourished, fairly developed, with the following vital signs: BP – 100/70 PR – 90/min RR – 25/Min
HEENT: Normocephalic, pale palperal conjunctivae; icteric sclerae, pupils equally reactive to light; no aural nor nasal discharge; no throat congestion.
Chest/Lungs: Symmetrical on expansion; no retractions; no lagging; decreased breath sounds; no rales, no wheezes.
Heart: No precordial bulging; PMI at 5th ICS MCL; normal rhythm; no murmure.
Abdomen:Globular, soft, tender on deep palpation at the epigastric area, RUQ and RLQ of the abdomen; normoactive bowel sounds; (+) fluid wave.

CASE SUMMARY:		
Extremities: (+) oedema, both lower extremities. Skin: (+) yellowish discoloration, generalized		
ADMITTING IMPRESSION: HEPATIC ENCEPHALOPATHY FULMINANT HEPATITIS R/O LAENNEC'S CIRRHOSIS		
Laboratory Examinations: Urinalysis (12–17–87): Amber; turbid; acidic; sp. gr – 1.015 sugar – trace; albumin (–); WEC 1–2/hpf; Crystals – A.U. +++; uric acid – few Liver Function Test: Total Protein: 60 g/l	Albumin: 35 g/l A/G ratio: 1.4/1 CBC:Hgb : 143 Gms/l Hct – .42	Globulin: 25 g/l Alkaline phosphatase: 58 u./l WBC – 16.8 x 10 Eos–.03 Seg. –.80 Lympho–.17
Fecalysis: Yellowish brown; soft; (+) hookworm ova 3/cs Ascitic fluid examination (Q/Q): Yellowish Total Protein Mass Conc: 60 g/l Total cell count: 202/cu.mm Total RBC: 182/cu.mm Total WBC: 20/cu.mm 100% lymphocytes Ascitic fluid cytology: Smear shows few lymphocytes, RBC and mesothelial cells. No malignant cells seen.	Serum Creatinine (Dec. 16, 1987): 212 umol/l Ultrasound, Liver, Gallbladder and Pancreas: The liver is enlarged showing increased echo pattern. The intra–hepatic ducts are not dilated. The gallbladder is normal in size. No intraluminal echoes appreciated. Pancreas not appreciated. Spleen and right kidney show increased echo textures. There is evidence of ascites.	
IMPRESSION: Diffuse Liver, Spleen and Parenchymal Disease Ascites		
COURSE IN THE WARD: Patient stayed in the ward for 5 days. Patient had abdominal paracentesis on the 3rd HD. 20 cc. of ascitic fluid was obtained for cytology and cell block. Symptoms persisted and was later associated with dyspnea and back pain. On the 5th HD, patient expired in spite of resuscitative measures.		

AUTOPSY FINDINGS:
GROSS DESCRIPTION: Lung: the right lung weighs 685 gms, the left lung weighs 700 gms, yellowish brown with some nodulations on the surface. Cut section shows moderate congestion.
Ascitic fluid amounting to 1,000 cc. was recovered.
Pancreas: The pancreas weighs 245 gms (NV = 100 gms), reddish brown. Cut section shows whitish multiple nodules in the head and body, soft in consistency.
Liver: The liver weighs 3205 gms, meas. 36x21x12.5 cm. (NV = 1600 gms, 25–30 x 19 x 6–9 cm), yellow green with multiple nodulations. Cut section shows congestion, soft and rubbery mass. Common bile duct circumference = 2.2 cm.
Stomach: with gastrorrhagia amounting to 100 cc, with multiple micro–hemorrhages.
Kidneys: The left kidney weighs 130 gms, the right kidney weighs 132 gms, capsules easily peeled off.
MICROSCOPIC DESCRIPTION: Representative sections taken from the pancreas shows nests of cells with glandular formation and mucin production. These cells have acidophilic cytoplasm, hyperchromatic nuclei and prominent nucleoli. These cells are of uniform size and with some central areas of necrosis. There are areas of fibrosis surrounding some nests of neoplastic cells and chronic inflammatory cells. Some of these cells are within the blood vessels adhering to the endothelial surface. The pancreatic lymph nodes and liver were also infiltrated by these neoplastic cells. Representative sections taken from the stomach shows submucosal oedema with neutrophilic infiltrations. Representative sections taken from the lobes of the lungs and tracheo–bronchial lymph nodes show the same pattern and kind of cells. There are tumor emboli and areas of haemorrhages noted. There are some areas of segmental dilated alveoli with free–floating septae and slit–like spaces. Representative sections from the kidneys show eosinophilic granular casts with indistinct cellular borders on the tubules. Some bile pigments within the tubules were also seen. Microsections taken from the adrenals show neoplastic cells infiltrating the parenchyma and fatty change. Microsections taken from the spleen show destroyed follicular architecture with oedema. Microsections taken form the aorta show mild atheromatous plaque.

AUTOPSY FINDINGS:
PATHOLOGIST'S SUMMARY: This is a case of a 27 year old male who presented with the above signs and symptoms which are compatible with carcinoma of the body and head of the pancreas. Grossly it is hard to determine the origin of the lesions but correlating it to the late onset of jaundice and the massive metastasis, the tumor could have started from the body of the pancreas since early involvement of the head produces early signs and symptoms. The distention of the Glisson's capsule and involvement of the large autonomic trunks in the preperitoneal tissue by the tumour produces the epigastric pain. The compression of the distal common bile duct by the tumour mass causes some degree of obstruction producing jaundice. The increased portal venous pressure produces ascites and pedal oedema. Hypoalbuminemia is a contributory factor. The dyspnea is explained by the invasion of the lungs by these neoplastic cells. Resorption of air distal to the lesion produces segmental atelectasis and compensatory emphysema in other areas.
The most common sites of metastasis in cancer of the pancreas are in the liver, regional lymph nodes, peritoneum and lungs. Other sites which are also involved with metastasis include the adrenals, duodenum, kidneys, stomach and gallbladder. This patient had metastases in the liver, peri–pancreatic lymph nodes, lungs and adrenals. The liver and lung metastases were quite extensive but the ultrasound of the liver only revealed diffuse parenchymal disease.
PROVISIONAL ANATOMIC DIAGNOSIS: Pancreatic carcinoma with metastasis to the liver and lungs Stress Ulcer Ascites Pulmonary congestion Cholemic Nephrosis Congestion, Spleen
FINAL ANATOMICAL DIAGNOSIS: WELL DIFFERENTIATED DUCTAL ADENOCARCINOMA, PANCREAS with metastasis to the peri–pancreatic lymph nodes, liver, lungs, tracheo–bronchial lymph nodes and adrenals Acute Tubular Necrosis, kidneys Stress Gastritis Congestion, Spleen Mild Atherosclerosis

Answers to Question 3(c)

These examples should be abstracted as follows:

N.	29/09/86	Path Report S–86–2607: Invasive ductal CA, breast mass, left 3.4 x 3 x2 cm; with invasion of surrounding fibrofatty tissue.
O.	18/06/87	Path Report S–87–2447: s/p MRM (R): Invasive ductal CA (R) breast *lower outer quadrant* (LOQ), 6 x 6 cm.; all 22 axillary lymph nodes negative for metastases.
P.	17/08/88	Path Report S–88–2889: Astrocytoma Grade III; 5 x 4 x 3 cm, left superior frontal cortical lesion.
Q.	20/12/87	Autopsy No. A–87–70: Well differentiated Ductal Adenocarcinoma, pancreas with metastases to peripancreatic LN, liver, lung, tracheo–bronchial LN, and adrenals In Section 3.3.4, this case would be entered as: 'Method of Detection = Autopsy'. Basis of diagnosis code would be: autopsy, with histology.

Appendix 3.1

Reportable list

This includes:

A. All carcinomas and sarcomas

B. All tumours specified as malignant in ICD-O (1990 edition)

C. All tumours not specified as malignant but with /3 behaviour codes

	Diagnosis	Morphology/ Behaviour codes
1.	Acute differentiated progressive histocytosis	M 9722/3
2.	Acute erythremia	M 9841/3
3.	Acute erythremia myelosis	M 9841/3
4.	Acute myelofibrosis	M 9932/3
5.	Acute panmyelosis	M 9931/3
6.	Acute progressive histiocytosis X	M 9722/3
7.	Adomantiroma of long bones	M 9261/3
8.	Adamantinoma, tibial	M 9261/3
9.	Adenoacanthoma	M 8570/3
10.	Adenocarcinoid tumour	M 8245/3
11.	Adenoma, bronchial, carcinoid	M 8240/3
12.	Adenoma, bronchial, cylindroid	M 8200/3
13.	Alpha heavy chain disease	M 9762/3
14.	Anaplastic choroid plexus papilloma	M 9390/3
15.	Angioendotheliomatosis	M 9712/3
16.	Askin's tumour	M 8803/3
17.	Astroblastoma	M 9430/3
18.	Astrocytoma	M 9400/3
19.	Astroglioma	M 9400/3
20.	Balloon cell melanoma	M 8722/3
21.	Basal cell epithelioma	M 8090/3
22.	Bednar tumour	M 8833/3
23.	Biphasic mesothelioma, NOS	M 9053/3
24.	Blastoma, NOS	M 8000/3
	Blastoma, pulmonary	M 8972/3
25.	Bowen's tumour	M 8081/2
26.	Burkitt's tumour	M 9677/3
	Burkitt's lymphoma	M 9687/3

27.	Carcinoid tumour (except Appendix)	M 8240/3
28.	Cervical intraepithelial neoplasia, Grade III	M 8077/2
	CIN III, NOS	M 80772/2
	CIN III, with severe dysplasia	M 80772/2
29.	Chain disease, gamma heavy	M 9763/3
30.	Chloroma	M 9930/3
31.	Chordoma	M 9370/3
32.	Chorioepithelioma	M 9100/3
	Chorionepithelioma	M 9100/3
33.	Chronic erythaemia	M 9842/3
34.	Cutaneous lymphoma	M 9709/3
35.	Cylindroma, NOS	M 8200/3
36.	Cyst, dermoid, with malignant transformation	M 9084/3
37.	Cystadenoma, papillary, borderline malignancy	M 8451/3
38.	Cystadenoma, mucinous, borderline malignancy	M 8473/3
39.	Cystadenoma, papillary pseudomucosis, borderline malignancy	M 8473/3
40.	Cystadenoma, papillary serose, borderline malignancy	M 8462/3
41.	Cystadenoma, pseudomucinous, borderline malignancy	M 8472/3
42.	Cystadenoma, serous, borderline malignancy	M 8442/3
43.	Dé Englielmo's disease	M 9841/3
44.	Diktyoma	M 9501/3
45.	Dysgerminoma	M 9060/3
46.	Embryonal hepatoma	M 8970/3
47.	Embryonal teratoma	M 9080/3
48.	Endodermal sinus tumour	M 9071/3
49.	Ependymablastoma	M 9392/3
50.	Ependymoma, NOS	M 9391/3
	– Epithelial ependymoma	M 9391/3
51.	Epithelial cell melanoma	M 8771/3
52.	Epithelioma, NOS	M 8011/3
53.	Erythroleukaemia	M 9840/3
54.	Erythroplasia, Queyrat's	M 8082/2
55.	Esthesio neuroblastoma	M 9522/3
55.	Esthesio neurocytoma	M 9521/3
56.	Esthesio neuroepithelioma	M 9522/3
57.	Ewing's tumour	M 9240/3
58.	Erythromammary Paget's disease (except Paget's disease of bone)	M 8542/3
59.	Extramedullary plasmocytoma	M 9731/3
60.	Franklin's disease	M 9763/3
61.	Ganglioneuroblastoma	M 9490/3
62.	Gemistocytoma	M 9411/3
63.	Germ cell tumour	M 9064/3
64.	Germinoma	M 9064/3
65.	Glioblastoma multiforme	M 9440/3
66.	Glioma, NOS (except nasal glioma)	M 9380/3
67.	Grawitz tumour	M 8312/3
68.	Hepatoblastoma	M 8970/3
69.	Hepatoma, NOS	M 8170/3
70.	Histiocytic medullary reticulosis	M 9720/3

71.	Histiocytosis X, acute progressive	M 9722/3
72.	Hodgkin's disease	M 9650/3
	Hodgkin's granuloma	M 9661/3
	Hodgkin's paragranuloma	M 9660/3
73.	Hutchinson's melanotic freckle, NOS	M 8742/3
74.	Hypernephroma	M 8312/3
75.	Immature teratoma	M 9080/3
76.	Immunocytoma	M 9671/3
77.	Immunoproliferative disease	M 9760/3
	Immunoproliferative small intestinal disease	M 9764/3
78.	Klatskin tumour	M 8162/3
79.	Krukenberg tumour	M 8490/6
80.	Langhanz, Wackernde struma	M 8332/3
81.	Lennert's lymphoma	M 9704/3
82.	Lentigo maligna	M 8742/2
83.	Letterer-Siwe's disease	M 9722/3
84.	Leukaemia	M 9800/3
85.	Linitis plastica	M 8142/3
86.	Lymphoblastoma	M 9685/3
87.	Lymphoepithelioma	M 8082/3
88.	Macroglobulinemia, Waldenstrom's	M 9761/3
89.	Medullary histiocytic reticulosis	M 9720/3
90.	Medulloblastoma	M 9470/3
91.	Medulloepithelioma, NOS	M 9501/3
92.	Medullomyoblastoma	M 9472/3
93.	Melanoma, NOS	M 8420/3
93.	Merkel cell tumour	M 8247/3
94.	Mesodermal mixed tumour	M 8951/3
95.	Mesonephroma, NOS	M 9110/3
96.	Mesothelioma, NOS	M 9050/3
97.	Microglioma	M 9594/3
98.	Mucocarcinoid tumour	M 8293/3
	Mullerian mixed tumour	M 8950/3
99.	Mycosis fungoides	M 8910/3
100.	Multiple myeloma	M 9732/3
	– Plasma cell myeloma	
	– Solitary myeloma	
	– Myelomatosis	
101.	Nephroblastoma, NOS	M 8940/3
102.	Nephroma, NOS	M 8940/3
103.	Neuroblastoma, NOS	M 9500
104.	Neuroectodermal tumour, primitive	M 9473/3
105.	Neuroepithelioma, NOS	M 9503/3
106.	Neurogenic tumour, olfactory	M 9520/3
107.	Non-Hodgkin lymphoma (see malignant lymphoma)	M 9591/3
108.	Non-lipid reticuloendotheliosis	M 9722/3
109.	Oligoastrocytoma	M 9382/3
110.	Oligodendroblastoma	M 9460/3
111.	Oligodendroglioma	M 9450/3

112.	Orchioblastoma	M 9071/3
113.	Paget's disease of breast	M 8540/3
114.	Pancreatoblastoma	M 8971/3
115.	Peripheral neuroectodermal tumour	M 9364/3
116.	Pheochromoblastoma	M 8700/3
117.	Pineablastoma	M 9362/3
118.	Plasma cell leukaemia	M 9830/3
119.	Plasma cell myeloma	M 9732/3
120.	Plasmocytic lymphoma	M 9671/3
121.	Plasmocytoma	M 9731/3
122.	Pleomorphic Xantho astrocytoma	M 9424/3
123.	Pneumoblastoma	M 8972/3
124.	Polyembryoma	M 9072/3
125.	Polymorphic reticulosis	M 9713/3
126.	Polyvesicular vitelline tumour	M 9071/3
127.	Precancerous melanosis, NOS	M 8741/2
128.	Primitive polar spongioblastoma	M 9443/3
129.	Pseudomyxoma peritonei	M 8480/6
130.	Pulmonary blastoma	M 8972/3
131.	Retinoblastoma	M 9510/3
132.	Rodent ulcer	M 8090/3
133.	Schminke tumour	M 8082/3
134.	Sclerosing tumour, nonencapsulated	M 8350/3
135.	Seminoma, NOS	M 9061/3
136.	Spermatocytoma	M 9063/3
137.	Spongioblastoma	M 9422/3
138.	Spongioneuroblastoma	M 9504/3
139.	Sympathicoblastoma	M 9500/3
140.	Sezary's syndrome	M 9701/3
141.	Systemic tissue mast cell disease	M 9741/3
142.	Teratoid medulloepithelioma	M 9502/3
143.	Teratoma, embryonal	M 9080/3
	– immature	M 9080/3
	– malignant	M 9080/3
	– with malignant transformation	M 9084/3
144.	True histiocytic lymphoma	M 9723/3
145.	VAIN, III	M 8077/2
146.	VIN, III	M 8077/2
147.	Vipoma	M 8155/3
148.	Wilms' tumour	M 8960/3
149.	Wuchernde Struma Langhans	M 8332/3
150.	Yolk sac tumour	M 9071/3