Reporting Protocol for the Examination of Gross Autopsy of Adult Decedents

Version: autopsy-adult-20.02
Protocol Posting Date: February 2020

Accreditation Requirements
The use of this protocol is recommended for autopsy but is not required for accreditation purposes.

This protocol may be used for the following procedures:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autopsy</td>
<td>Includes routine autopsy for adult decedents</td>
</tr>
</tbody>
</table>

The following should NOT be reported using this protocol:

<table>
<thead>
<tr>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forensic autopsy</td>
</tr>
<tr>
<td>Pediatric autopsy</td>
</tr>
</tbody>
</table>

Authors
Jody E. Hooper, MD*, Katie Flickinger, MS, PA (ASCP)CM*
With guidance from the CAP Autopsy and Neuropathology Committees.
* Denotes primary author. All other contributing authors are listed alphabetically.

Summary of Changes
20.02 – New autopsy reporting protocol
Reporting Template

Notes: This case summary may be useful for reporting autopsy findings but is not required for accreditation purposes. (NOTE A)

PATIENT IDENTIFICATION AND CONSENT FOR AUTOPSY

Patient name: ______________________

Consent and patient ID reviewed by
Dr. ____________________
Mr./Ms. ____________________

Two unique patient identifiers reviewed
Patient name: ____________________
Date of birth: ____________________
MRN: ____________________
Other: ____________________

___ Type of autopsy
___ Complete
___ Brain only
___ No head
___ Chest only
___ Abdomen only
___ Other: ____________________

Name of consenter: ____________________

Relationship to the deceased: ____________________

PRIOR POSTMORTEM PROCEDURES

___ Organ Donation (select all that apply)
___ Corneas
___ Skin
___ Bone and soft tissue (specify): ____________________
___ Organs (specify): ____________________
___ Other (specify): ____________________

___ Funerary Preparation (select all that apply)
___ Eye caps
___ Jaws wired or sewn closed
___ Evidence of embalming (specify): ____________________
___ Other (specify): ____________________
**EXTERNAL APPEARANCE**

___ General
   ___ Well-developed
   ___ Other (specify): ____________________

___ Age: ______

___ Race
   ___ Caucasian
   ___ African American
   ___ Hispanic
   ___ Asian
   ___ Other (specify): ____________________

___ Sex
   ___ Male
   ___ Female
   ___ Other (specify): ____________________

Body Weight (kilograms) _____kg

Body Length (centimeters) _____cm

BMI ______

*Note: use formula weight (kg)/(height (m))^2*

___ Personal effect with or on the body
   ___ No
   ___ Yes (specify): ____________________

___ Toes / fingernails:
   ___ Unremarkable
   ___ Onychomycosis
   ___ Koilonychia
   ___ Splinter hemorrhages
   ___ Cyanotic
   ___ Other (specify): ____________________

___ Skin
   ___ Unremarkable
   ___ Other (specify): ____________________

___ Palpable lymph nodes
   ___ No
   ___ Yes
      ___ Neck
      ___ Axilla
      ___ Groin
      ___ Other (specify): ____________________

___ Hair
   ___ None
   ___ Balding
   ___ Short
   ___ Long

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
___ Other (specify): ____________________

___ Hair color
   ___ Black
   ___ Brown
   ___ Blond
   ___ Grey
   ___ Other (specify): ____________________

___ Eye color
   ___ Brown
   ___ Blue
   ___ Hazel
   ___ Green
   ___ Other (specify): ____________________

Pupil measurement- right (centimeters): ________ cm

Pupil measurement- left (centimeters): ________ cm

___ Sclerae
   ___ Anicteric
   ___ Icteric
   ___ Other (specify): ____________________

___ Ears
   ___ Unremarkable
   ___ Other (specify): ____________________

___ Nose
   ___ Unremarkable
   ___ Other (specify): ____________________

___ Oral cavity
   ___ Good dentition
   ___ Poor dentition
   ___ Dentures
   ___ No teeth
   ___ Exam not performed due to rigor
   ___ Other (specify): ____________________

___ External genitalia
   ___ Normal male
   ___ Normal female
   ___ Other (specify): ____________________

___ Leg circumference 10 cm from medial malleolus
   ___ Right (centimeters): ________ cm
   ___ Left (centimeters): ________ cm

___ Edema
   ___ None
   ___ Peripheral
   ___ Generalized
   ___ Other (specify): ____________________
__ Scars/ Incisions
   ___ None
   ___ Present (specify): ____________________
      ___ Location (specify): ___________
      ___ Size (centimeters): ____ cm

__ Evidence of therapy
   ___ None
   ___ Nasogastric tube
   ___ PEG tube
   ___ Endotracheal tube
   ___ Foley catheter
   ___ Other (specify): ____________________

__ Back
   ___ Unremarkable
   ___ Other (specify): ____________________

INCISIONS AND BODY CAVITIES

__ Incision
   ___ Standard Y-shaped
   ___ Biparietal
   ___ Other (specify): ____________________

__ Organs in normal anatomic positions
   ___ Yes
   ___ No
   ___ Other (specify): ____________________

+ Panniculus (centimeters measured at thickest area): _______ cm

__ Peritoneal fluid
   ___ None
   ___ Present (milliliters): __________ ml
      ___ Serous
      ___ Cloudy
      ___ Serosanguinous
      ___ Sanguinous
      ___ Other (specify): ____________________

__ Peritoneal surfaces
   ___ Smooth
   ___ Adhesions
   ___ Other (specify): ____________________

__ Right pleural cavity
   ___ Smooth
   ___ Adhesions
   ___ Other (specify): ____________________

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
___ Right pleural fluid
  ___ None
  ___ Present (milliliters): __________ ml
    ___ Serous
    ___ Serosanguinous
    ___ Sanguinous
    ___ Other (specify): ____________________

___ Left pleural cavity
  ___ Smooth
  ___ Adhesions
  ___ Other (specify): ____________________

___ Left pleural fluid
  ___ None
  ___ Present (milliliters): __________ ml
    ___ Serous
    ___ Serosanguinous
    ___ Sanguinous
    ___ Other (specify): ____________________

CARDIOVASCULAR SYSTEM

___ Heart weight
  ___ (grams): __________ g  
  _Note: see reference table by patient weight_

___ Pericardium
  ___ Intact
  ___ Adhesions
  ___ No adhesions
  ___ Other (specify): ____________________

___ Pericardial fluid
  ___ None
  ___ Present (milliliters): __________ ml
    ___ Serous
    ___ Sanguinous
    ___ Other (specify): ____________________

+ ___ Epicardial fat
  + ___ Minimal
  + ___ Moderate
  + ___ Large amount
  + ___ Other (specify): ____________________

___ Epicardial surface
  ___ Smooth
  ___ Glistening
  ___ Roughened
  ___ Other (specify): ____________________
___ Coronary ostia
   ___ Normally positioned
   ___ Patent
   ___ Other (specify): ____________________

___ Foramen ovale
   ___ Closed
   ___ Probe patent
   ___ Other (specify): ____________________

___ Coronary arteries follow normal anatomic course
   ___ Yes
   ___ No
   ___ Other (specify): ____________________

___ Coronary circulation
   ___ Right dominant
   ___ Left dominant
   ___ Co-dominant

Atherosclerosis
___ Left anterior descending artery (LAD)
   ___ None
   ___ % stenosis: __________
   ___ Eccentric
   ___ Concentric
   ___ Other (specify): ____________________

___ Left circumflex artery (LCX)
   ___ None
   ___ % stenosis: __________
   ___ Eccentric
   ___ Concentric
   ___ Other (specify): ____________________

___ Right coronary artery (RCA)
   ___ None
   ___ % stenosis: __________
   ___ Eccentric
   ___ Concentric
   ___ Other (specify): ____________________

___ Chamber dilation
   ___ Yes
   ___ No
   ___ Other (specify): ____________________

___ Valve leaflets
   ___ Thin/ delicate
   ___ Other (specify): ____________________

___ Chordae tendinae
   ___ Thin
   ___ Other (specify): ____________________
+ Valve circumferences
  + Tricuspid (centimeters): _________ cm
    Abnormalities (specify): ____________________
    Note: Reference range 10.0 – 12.5 cm
  + Pulmonic (centimeters): _________ cm
    Abnormalities (specify): ____________________
    Note: Reference range 7.0 – 9.0 cm
  + Mitral (centimeters): _________ cm
    Abnormalities (specify): ____________________
    Note: Reference range 8.0 – 10.5 cm
  + Aortic (centimeters): _________ cm
    Abnormalities (specify): ____________________
    Note: Reference range 6.0 – 7.5 cm

___ Myocardium
   ___ Firm
   ___ Red-brown
   ___ Other (specify): ____________________

___ Endocardium
   ___ Smooth and thin
   ___ Thickened
   ___ Other (specify): ____________________

Left ventricular free wall (centimeters): _________ cm
Note: Reference range less than 1.5 cm

Right ventricular free wall (centimeters): _________ cm
Note: Reference range less than 0.5 cm

Septum (centimeters): _________ cm
Note: Reference range less than 1.5 cm

___ Pulmonary artery
   ___ Appropriate caliber
   ___ Normal configuration
   ___ Contains embolus
   ___ Other (specify): ____________________

___ Ascending aorta
   ___ Appropriate caliber
   ___ Normal configuration
   ___ Other (specify): ____________________

___ Major arteries arising from aortic arch
   ___ Normal configuration
   ___ Patent
   ___ Other (specify): ____________________

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
**Thoracic aorta**
- No atherosclerosis
- Mild atherosclerosis
- Moderate atherosclerosis
- Severe atherosclerosis

**Abdominal aorta**
- No atherosclerosis
- Mild atherosclerosis
- Moderate atherosclerosis
- Severe atherosclerosis

**Venae cavae**
- Patent
- Thin- walled
- Thrombi present
- Other (specify): ____________________

**RESPIRATORY SYSTEM**

**Epiglottis, larynx, trachea**
- No lesions
- Other (specify): ____________________

**Right lung weight (grams): _________ g**
*Note: Reference range 360 – 570 g*

**Left lung weight (grams): _________ g**
*Note: Reference range 325 – 480 g*

**Fixation**
- Fixed in distension
- Cut fresh
- Other (specify): ____________________

**Right lung parenchyma**
- Soft and pale red
- Other (specify): ____________________

**Left lung parenchyma**
- Soft and pale red
- Other (specify): ____________________

**Bronchi**
- Patent
- Other (specify): ____________________

**Bronchial mucosa**
- No lesions
- Other (specify): ____________________

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
___ Pulmonary arteries
   ___ No atherosclerosis
   ___ Atherosclerosis
   ___ Pulmonary emboli (specify size and location)
   ___ No pulmonary emboli
   ___ Other (specify): ____________________

DIGESTIVE SYSTEM

+ ___ Tongue
   + ___ Papillated
   + ___ Smooth
   + ___ Other (specify): ____________________

___ Esophagus
   ___ Normal anatomic configuration
   ___ Other (specify): ____________________

___ Esophageal mucosa
   ___ White
   ___ Intact
   ___ Other (specify): ____________________

___ Squamocolumnar junction
   ___ Sharply defined
   ___ Indistinct
   ___ Other (specify): ____________________

___ Stomach
   ___ Empty
   ___ Distended
   ___ Contains partially digested food and liquids
   ___ Other (specify): ____________________

___ Gastric mucosa
   ___ Intact, rugated
   ___ Other (specify): ____________________

___ Appendix
   ___ Present
   ___ Surgically absent
   ___ Other (specify): ____________________

___ Small bowel
   ___ Usual caliber
   ___ Dilated
   ___ Strictures
   ___ Other (specify): ____________________

___ Small bowel serosa
   ___ Tan pink shiny
   ___ Adhesions
   ___ Other (specify): ____________________

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
Small bowel contents (specify): ____________________

___ Small bowel mucosa
   ___ Tan
   ___ No lesions
   ___ Other (specify): ____________________

___ Large bowel
   ___ Usual caliber
   ___ Dilated
   ___ Stricture
   ___ Other (specify): ____________________

___ Large bowel serosa
   ___ Tan pink shiny
   ___ Adhesions
   ___ Other (specify): ____________________

Large bowel contents (specify): ____________________

___ Large bowel mucosa
   ___ Tan
   ___ No lesions
   ___ Polyps
   ___ Diverticula
   ___ Other (specify): ____________________

+ ___ Superior mesenteric artery
   + ___ No atherosclerosis
   + ___ Degree of atherosclerosis (specify): ____________________
   + ___ Other (specify): ____________________

Liver weight (grams): __________ g
Note: Reference range 1500 – 1800 g

___ Liver capsule
   ___ Smooth
   ___ Glistening
   ___ Intact
   ___ Other (specify): ____________________

___ Liver parenchyma
   ___ Slightly firm
   ___ Firm
   ___ Soft
   ___ Maroon-brown
   ___ Green tinged
   ___ Yellow orange
   ___ Rusty brown
   ___ Mottled red
   ___ Nodular
   ___ No focal lesions
   ___ Other (specify): ____________________
**Gallbladder**
- Present
- Surgically absent
- Other (specify): ____________________

**Gallbladder wall**
- Thin
- Fibrous
- Other (specify): ____________________

**Gallbladder mucosa**
- Velvety
- Green
- Other (specify): ____________________

**Gallbladder contents**
- Dark green mucoid bile
- No calculi
- Calculi
- Other (specify): ____________________

**Extrahepatic biliary system**
- Patent
- Other (specify): ____________________

**Portal vein**
- Patent
- Other (specify): ____________________

**Hepatic arteries**
- Patent
- Other (specify): ____________________

**Hepatic veins**
- Patent
- Other (specify): ____________________

**Pancreas dimensions (centimeters): ____ cm x ____ cm x ____ cm**
*Note: Average 23.0 x 4.5 x 3.8 cm*

**Pancreatic parenchyma**
- Tan
- Firm and lobulated
- Autolyzed
- Other (specify): ____________________

**Pancreatic duct**
- Patent
- Not probe patent
- Other (specify): ____________________
URINARY TRACT

Note: Average combined kidney weight 230-440 g

Right kidney weight (grams): __________ g

___ Right kidney cortex
   ___ Thickness (centimeters): ____ cm
   ___ Smooth
   ___ Granular
   ___ Scarred
   ___ Other (specify): ____________________

___ Right kidney parenchyma
   ___ Red-brown
   ___ Clearly demarcated corticomedullary junctions
   ___ Ill-defined corticomedullary junctions
   ___ Other (specify): ____________________

___ Right ureter
   ___ Patent
   ___ Not patent
   ___ Dilated
   ___ Not dilated
   ___ Other (specify): ____________________

Left kidney weight (grams): __________ g

___ Left kidney cortex
   ___ Thickness (centimeters): ____ cm
   ___ Smooth
   ___ Granular
   ___ Scarred
   ___ Other (specify): ____________________

___ Left kidney parenchyma
   ___ Red-brown
   ___ Clearly demarcated corticomedullary junctions
   ___ Ill-defined corticomedullary junctions
   ___ Other (specify): ____________________

___ Left ureter
   ___ Patent
   ___ Not patent
   ___ Dilated
   ___ Not dilated
   ___ Other (specify): ____________________

___ Renal arteries
   ___ Patent
   ___ No atherosclerosis
   ___ Mild atherosclerosis
   ___ Moderate atherosclerosis
   ___ Severe atherosclerosis

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
___ Bladder
    ___ Collapsed
    ___ Volume of urine (milliliters): __________ ml

___ Bladder mucosa
    ___ Intact
    ___ Other (specify): ____________________

MALE REPRODUCTIVE TRACT (if appropriate)

___ Prostate
    ___ Normal size
    ___ Enlarged
    ___ Nodular
    ___ Size (centimeters): ____ cm x ____ cm x ____ cm
    ___ Other (specify): ____________________

___ Testes
    ___ Normal size
    ___ Enlarged
    ___ Other (specify): ____________________

___ Testes cut surface
    ___ Brown parenchyma
    ___ Tubules string in normal manner
    ___ Tubules do not string
    ___ Other (specify): ____________________

FEMALE REPRODUCTIVE TRACT (if appropriate)

___ Uterus
    ___ Present and appropriate size
    ___ Present (comment): ____________________
    ___ Surgically absent

___ Right Ovary
    ___ Size (centimeters): ____ cm x ____ cm x ____ cm
    ___ Not identified
    ___ Other (specify): ____________________

___ Left Ovary
    ___ Size (centimeters): ____ cm x ____ cm x ____ cm
    ___ Not identified
    ___ Other (specify): ____________________

___ Endometrium
    ___ Pale
    ___ Red
    ___ Other (specify): ____________________

___ Vagina
    ___ Without lesions
    ___ Other (specify): ____________________
___ Cervix
   ___ Without lesions
   ___ Other (specify): ____________________

ENDOCRINE SYSTEM

Right adrenal weight (grams): __________ g
Note: Average weight 6 g (trimmed)

Left adrenal weight (grams): __________ g
Note: Average weight 6 g (trimmed)

___ Adrenal parenchyma
   ___ Uniform yellow cortices
   ___ Good demarcation from the medullae
   ___ Autolyzed
   ___ Other (specify): ____________________

___ Thyroid
   ___ Weight (grams): __________ g
   ___ Symmetrical
   ___ Red-brown
   ___ Firm
   ___ Nodular
   ___ Other (specify): ____________________
Note: Average weight 30 – 70 g

___ Breast tissue contains small amount of white fibrous tissue within yellow fat
   ___ Other (specify): ____________________

LYMPHORETICULAR SYSTEM

Spleen weight (grams): __________ g
Note: Average weight 150 – 200 g unless over 80-years-old, then average 100 g

___ Spleen capsule
   ___ Smooth
   ___ Intact
   ___ Other (specify): ____________________

___ Spleen parenchyma
   ___ Dark red
   ___ Other (specify): ____________________

___ Bone marrow
   ___ Dark red
   ___ Hard
   ___ Softer than usual
   ___ Other (specify): ____________________

___ Lymph nodes
   ___ Not enlarged
   ___ Other (specify): ____________________
**Thymus**
- Not identified
- Age appropriate fatty replacement
- Present (weigh)
- Other

**MUSCULOSKELETAL SYSTEM**

**Diaphragm**
- Intact
- Other (specify): ____________________

**Skeletal muscles**
- Red-brown and firm
- Appropriate mass for age/ gender
- Other (specify): ____________________

**Calvarium**
- Intact
- Normal thickness
- Other (specify): ____________________

**Vertebral column**
- Normal curvature
- Kyphosis
- Scoliosis
- Other (specify): ____________________

**Ribs**
- Fractures (specify): ____________________
- No fractures
- Other (specify): ____________________

**Vertebral bodies**
- No fractures
- Other (specify): ____________________

**CENTRAL NERVOUS SYSTEM**

Gross brain observations at time of autopsy. Post-fixation brain cutting observations and tissue sampling will be considered in separate protocol (under development)

**Brain weight (grams):** __________ g
*Note: Average weight 1100 – 1600 g*

**Dura**
- No lesions
- Epidural hemorrhage
- Subdural hemorrhage
- Removal reveals no bony abnormalities
- Other (specify): ____________________

**Leptomeninges**
- No lesions
- Subarachnoid hemorrhage

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
___ Opacity or discoloration
___ Other (specify): ____________________

___ Cerebral hemispheres
___ No lesions
___ Asymmetric (specify): ____________________
___ Atrophy (specify: diffuse, focal, lobar): ____________________
___ Edema (specify: diffuse, focal): ____________________
___ Other (specify): ____________________

___ Base of brain
___ No lesions
___ Uncal herniation

___ Circle of Willis
___ Normal
___ Atherosclerosis (specify location and severity): ____________________
___ Aneurysm (specify location and type): ____________________
*Note: If a ruptured aneurysm is suspected clinically and hemorrhage is present at the base of the brain, it is advisable to wash away the blood and conduct a thorough search for the aneurysm before fixation of the brain.
___ Other (specify): ____________________

___ Cerebellum
___ No lesions
___ Tonsillar herniation
___ Other (specify): ____________________

___ Brainstem
___ No lesions
___ Other (specify): ____________________

___ Spinal cord
___ Length (cm from cut superior to conus): ___________cm
___ No lesions
___ Other (specify): ____________________
___ Not submitted

___ Pituitary
___ No lesions
___ Other (specify): ____________________

+ EYES

+ ___ Eyes
  + ___ Submitted
  + ___ Not submitted
  + ___ Other (specify): ____________________

AUTOPSY PROCEDURES AND ANCILLARY TESTING

___ Approach to autopsy dissection
___ Rokitansky

+ Data elements preceded by this symbol may be of value but are not necessarily routinely reported.
___ Virchow
___ Other (specify): ____________________

___ Special dissection
___ None
___ Other (specify): ____________________

___ Tissue retention
___ Stock jar
___ All organs (until signout)
___ Other (specify): ____________________

___ Additional samples taken
___ Blood (specify): ____________________
___ Vitreous
___ Tissue (specify): ____________________
___ Other (specify): ____________________

___ Ancillary testing
___ None
___ Radiology (specify): ____________________
___ Blood cultures (specify): ____________________
___ Tissue cultures (specify): ____________________
___ Toxicology (specify): ____________________
___ Other (specify): ____________________
Explanatory Notes

A. Introduction
The aim of this protocol is to improve the completeness, clarity, and portability of autopsy reporting, while being mindful of the wide range of practice settings in which the data in the report is generated and disseminated. Autopsy reporting has traditionally been entirely in prose, a methodology which complicates real time dictation in many cases, and which does not make data easily retrievable, particularly across institutions.

The protocol is based upon input from past and present members of the CAP Autopsy Committee, CAP Neuropathology Committee, and input from Katie Flickinger, MS, PA(ASCP)CM as well as the references below.

The construction of this protocol does allow for the insertion of sentences where desired and thus combines the best of templating and traditional description. It is recommended that it be used as a paper copy or electronic tool directly in the autopsy suite while a case is being completed, though its use can be adapted as needed at different centers and depending on the information technology environment. Portions of the template may also be used in limited autopsies. Though this template represents the Autopsy Committee’s recommendations for inclusion in an autopsy report, some sections with a plus sign “+” are considered more readily optional in practice and could be omitted.

Not only will the template provide more easily reproducible and extractable data, it may be used as a guide for trainees and pathologists who may only perform a limited number of autopsies in their practice. The committee hopes this is a first step in providing a general framework for more standardized quality autopsy practice.

The content of the protocol represents the consensus opinion of the CAP Autopsy Committee. It was ordered by organ system rather than order of the block dissection in recognition of variations in dissection practices across institutions as well as to create the most intelligible final report. Recognizing that the order of elements may be adjusted by users, it is the Committee’s recommendation that all elements be included in the Gross Description. Microscopic sampling can also be institution dependent, but the Committee recommends broad histologic evaluation for autopsies.

References