COLLEGE of AMERICAN PATHOLOGISTS

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:

Procedure	Description
Autopsy	Includes routine autopsy for adult decedents

The following should NOT be reported using this protocol:

Procedure
Forensic autopsy
Pediatric autopsy

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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

___ 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): _____

___ **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): _____

___ **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): _____

___ **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
- ___ Strictured
- ___ Other (specify): _____

___ **Small bowel serosa**
- ___ Tan pink shiny
- ___ Adhesions
- ___ Other (specify): _____

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

___ **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

___ 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

___ 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

1. Fyfe-Kirschner B and Miller DK. The future of autopsy reporting: data repository and research support. In: Hooper and Williamson, editors. *Autopsy in the 21st Century: Best Practices and Future Ideas.* Switzerland: Springer;2019. 39-56.
2. Wittekind C, Habeck JO, Gradistanac T. Proposals for standardization of autopsy reports. *Pathologe* 2014;35:182-190. https://doi.org/10.1007/s00292-013-1885-8.
3. Hanzlick R. The autopsy lexicon: suggested headings for autopsy reports. In: Collins K, editor. *Autopsy Performance and Reporting.* 3rd ed. Chicago: CAP Press;2017. 377-382.