

## **AUTOPSY - INTRAUTERINE DEMISE PROTOCOL**

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#### ***[PLEASE USE ADDITIONAL SHEETS AS NEEDED TO FULLY DESCRIBE ABNORMAL FINDINGS]***

The body is that of a *small for gestational age/macrosomic/normally developed/dysmorphic male/female* infant weighing \_\_\_\_\_ g.

The crown-rump length is \_\_\_\_\_ cm and the crown-heel, \_\_\_\_\_ cm. The occipito-frontal circumference is \_\_\_\_\_ cm.

Maceration is *absent/mild/moderate/severe with* \_\_\_\_\_.

Rigor is *absent/mild/moderate/severe*.

Lividity is *absent/mild/moderate/severe* (state site)

Edema is *absent/focal/global (fetal hydrops)*.

The skin is \_\_\_\_\_.

(Describe any localized skin lesions, generalized discoloration, extent and distribution of sloughing, if macerated etc.)

The head is *normo/micro/macro* cephalic *with/without* molding or distortion.

The anterior fontanelle is \_\_\_\_\_ x \_\_\_\_\_ cm, the posterior fontanelle is \_\_\_\_\_ x \_\_\_\_\_ cm, and the cranial sutures are *overriding/mobile/normal*. Hair (*describe amount and distribution, color, quality*)

The eyes are *normally spaced/show hypertelorism*; the inner canthal distance is \_\_\_\_\_ cm and the outer canthal distance \_\_\_\_\_ cm.

The palpebral fissures are *normal/upslanted/ downslanted*, and the eyelids are *fused/separate*.

The pupils are *equal or unequal and measure* \_\_\_\_\_ and \_\_\_\_\_ *on the left and right sides, respectively*. ***[measure only if unequal]***

The sclerae are *white/discolored* \_\_\_\_\_ ; the corneas are *clear/cloudy*; and the irides are *dark/light*/The ears are *not low set or posteriorly rotated*. The pinna are *soft/folded/firm*

The nose is *normally formed*.

The mouth is *edentulous*.

The lip and palate are intact.

The philtrum measures 0.          cm.

The thorax appears *symmetric/distorted/narrow/broad*. The chest circumference is          cm. The inter nipple distance is          cm.

The abdomen is *flat/scaphoid/protuberant/markedly distended*. The abdominal circumference is          cm. There is *no/an* omphalocele or abdominal wall defect.

**[Measure if present]**

The segment of umbilical cord, measures          x          cm, and          vessels are identified.

The back appears *normal*. *No exposed neural tube defect or abnormal spinal curvature are present*.

The anus is *patent/imperforate*.

The external genitalia are *normally formed for a male/female*. *The testes are undescended. OR Both/right/left testes/ testis are/is in the scrotum*.

Inguinal Hernia is *absent/present*.

Extremities are unremarkable without contractures, syndactyly, polydactyly or clinodactyly. No palmar crease or sandal toe deformity are present. The foot length is          cm.          .

There are no other findings on external examination or          .

A fetal radiograph was obtained which shows          .

The usual Y-shaped thoracoabdominal incision and U-shaped biparietal scalp incisions are made.

**PERITONEAL CAVITY:** The peritoneal surfaces are *smooth and dusky/glistening*.

The peritoneal cavity contains          ml of *clear/cloudy/yellow/serosanguineous fluid/or blood*.

The liver is *normally configured and is anatomically normally situated*.

The spleen *is normally configured and is anatomically normally situated.*

The stomach is externally *unremarkable/distended*

The bowel is normally rotated without redundant mesentery such that the small intestine and large intestine are normally situated and the appendix is in the *right lower quadrant/pelvis.*

The mesenteric lymph nodes are *inconspicuous/unremarkable/diffusely enlarged.*

**PLEURAL CAVITIES:** The visceral and parietal pleural surfaces are *smooth and dusky/shiny with/without petechiae.*

The right pleural cavity contains *ml of clear/serous/serosanguineous fluid (or blood).*

The left pleural cavity contains *ml of clear/serous/serosanguineous fluid (or blood).*

The lungs occupy *95%* of their respective pleural cavities.

The right lung has *\_\_\_* lobes and the left lung has *\_\_\_* lobes.

**PERICARDIAL CAVITY:** The pericardial surfaces are *smooth and dusky/shiny.*

The cavity is free from adhesions and contains *ml of clear/serous/serosanguineous fluid (or blood).*

### **CARDIOVASCULAR SYSTEM:**

**HEART:** The heart weighs *g.* The viscerocardial situs is *solitus/inversus/ambiguous.*

There is a *D* ventricular loop with the cardiac apex and left ventricle to the left and a *solitus* relationship of the great arteries with the pulmonary artery anterior and to the right of the aorta.

*(If other than "solitus", "D", and "solitus", describe more thoroughly the site of the apex, position and relationship of the ventricles, and great arteries).*

The epicardium is *smooth without/with a scant amount of* adipose tissue.

There are *no* epicardial petechiae.

The atria *are/do not appear* distended.

The foramen ovale is patent.

The valve of the foramen ovale appears *sufficient/fenestrated/deficient* over the ostium.

There is no atrial septal defect.

The coronary sinus ostium is normal in size and location.

The mural and valvular endocardium is smooth *and dusky/translucent/white*.

The atrioventricular valves are thin and delicate with normal appearing chordae tendinae.

Both semilunar valves contain three cusps.

The ventricular chambers are not dilated.

The myocardium is *brown and unremarkable*.

There is no ventriculoseptal defect.

The measurements of the heart in cm are as follows:

Tricuspid Valve            cm, Pulmonic Valve            cm, Mitral Valve            cm, Aortic  
Valve            cm, Right Ventricular Myocardial wall            cm, Left Ventricular  
Myocardial wall            cm.

The venae cavae enter the right atrium

The ductus venosus is patent.

All four pulmonary veins enter the left atrium; there is no anomalous pulmonary venous connection.

The coronary ostia are in normal position.

The coronary arteries have a *right/left/dominant or aberrant* distribution on the epicardial surface.

The great vessels arise from a *left/right* sided aortic arch in a normal manner.

The caliber of the ascending aorta is normal, and there is no aortic coarctation.

The ductus arteriosus is patent.

The branch pulmonary arteries arise normally from the pulmonary trunk and are of normal caliber.

## **RESPIRATORY SYSTEM:**

The trachea and major bronchi are lined by *smooth/tan/purple/* mucosa, their lumens contain            fluid. There is no tracheal-esophageal fistula.

**LUNGS:** The weight of the lungs is: right            g; left            g. The cut surfaces *are airless/hemorrhagic*. The intraparenchymal bronchi and vessels appear normal. There are no cysts or localized lesions.

#### **HEMATOPOIETIC AND LYMPHATIC SYSTEM:**

**THYMUS:** The thymus weighs            g.

The external surface is *ivory/rose colored* and lobulated *without/with* petechiae.

The cut surfaces *are soft and unremarkable*.

**SPLEEN:** The spleen weighs            g.

The capsule is *dusky/shiny*.

On section the parenchyma is *soft and deep red* without localized lesions

The malpighian corpuscles are *inconspicuous*.

**LYMPH NODES AND MARROW:** The lymph nodes are *inconspicuous/tan and soft*.

Bone marrow is *red*.

#### **GASTROINTESTINAL SYSTEM:**

The mucosa of the esophagus is *grey with longitudinal folds* and its lumen is *empty/contains            fluid*.

The mucosa of the stomach is *unremarkable or* and its lumen contains            .

The length of the small bowel is            cm, the large bowel is            cm. The mucosa of the small intestine is *unremarkable* and its lumen contains            . There is no Meckel diverticulum.

The mucosa of the large intestine is *unremarkable* and its lumen contains *green meconium*.

**LIVER:** The liver weighs            g.

The capsule is *dull/shiny and smooth/disrupted*

On section the parenchyma is *homogenous and brown without cysts, other localized lesions or fibrosis*.

The bile, which is *green*, is freely expressed from the gallbladder into the duodenum.

**PANCREAS:** The pancreas is *tan and coarsely lobulated*. On section, *it is ivory/light tan and otherwise unremarkable*.

**ENDOCRINE SYSTEM:**

**ADRENALS:** The weight of the adrenals is: right            g; left            g. They are *normally shaped*. The cut surfaces reveal *bright yellow* fetal cortex and *thin brown* central zones.

**GENITO-URINARY SYSTEM:**

**KIDNEYS:** The weight of the kidneys is: right            g; left            g.

The renal arteries and veins are free from thrombi. The capsules strip easily from the *smooth* renal surfaces that exhibit fetal lobulations.

On section the cortex and medulla are *clearly* demarcated. There are no cysts or localized lesions.

The renal pelves and ureters are lined by *grey, translucent mucosa*.

**BLADDER:** The mucosa of the bladder is *ivory*. The ureteral orifices and urethra at the trigone are normal. The urachus is *closed/patent*.

**GENITALIA:** The prostate gland is small, firm and reveals no gross abnormalities. The testes are *descended in the scrotum/in the inguinal canal/intra-abdominal*.

*OR*

The vaginal mucosa is unremarkable. The uterus, cervix and fallopian tubes have a normal infantile appearance with an elongated cervix and small fundus. The ovaries are thin *with small/without* cysts.

**ORGANS OF THE NECK:** The thyroid and larynx reveal no gross abnormalities.

The submandibular glands are *tan and unremarkable*. (delete if not examined)

# parathyroids are identified.

**BRAIN:** The soft tissues of the scalp are *unremarkable/edematous/hemorrhagic*.

The sutures are separated by            cm.

The brain is initially examined fresh; it weighs            . Please see the Neuropathology Report, when issued, for further description.

The dura mater is *unremarkable*. The dural sinuses are *free from thrombi*.

The falx cerebri and the tentorium cerebelli are *intact*. The pia arachnoid is *clear*. There is *no* subarachnoid *hemorrhage nor exudate*. The convolutions and sulci are *appropriate for gestational age*.

The middle ears are *not examined*.

A segment of the *thoracoabdominal* spinal cord is removed by the anterior approach and reveals *no gross abnormalities*.

The pituitary gland is *unremarkable*.

**MUSCULO-SKELETAL SYSTEM:**

**BONES:** The vertebral bodies are *normally formed*, the joint spaces are *unremarkable*, and the marrow space is *deep red*. *No other bones are examined*.

**ADDITIONAL AREAS OF DISSECTION OR SPECIAL STUDIES:**

Placental Examination (S        ):

**PHOTOGRAPHS:**

**MICROSCOPIC BLOCKS TAKEN:**

AUTHOR:Typist

Date

**WEIGHTS AND MEASUREMENTS WITH REFERENCE RANGES**

(Paste in the output from the Gestational Age Anthropometry Website)

Reference range data generated from the Gestational Age Anthropometry Website  
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Matthew D. Cain, Joseph R. Siebert, Egiebade Iriabho, Alexander Gruneberg, Jonas S. Almeida, and Ona Marie Faye-Petersen (2015) Development of Novel Software to Generate Anthropometric Norms at Perinatal Autopsy. *Pediatric and Developmental Pathology*: May/June 2015, Vol. 18, No. 3, pp. 203-209.