



# REGIONAL PATHOLOGY AND AUTOPSY SERVICES

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## ***AUTOPSY PROTOCOL***

Case No: **MCSO18-08630-3**

Name: **Hart, Markis**

DOB: **7/1/1998**

Age: 19 years

Height: 68 inches

Weight: 124 pounds

Sex: Male

Date of Autopsy: 3/30/2018

Time of Autopsy: 0855 Hours

Pathologist: Greg B. Pizarro, M.D.

Client: Mendocino County Sheriff-Coroner

**INVESTIGATIVE INFORMATION:** According to investigative information, this 19-year-old male was found unresponsive near the vicinity of the vehicle he was aboard when it rolled off a cliff. On 3/27/2018 at 1645 hours, the Mendocino County Sheriff's Office responded to a fatal traffic accident, located at the area of Juan Creek Bridge of Westport. The accident occurred on a large dirt turnout located west of Highway 1, on the south side of the Juan Creek Bridge. The vehicle was located on the shoreline, approximately 140 feet down the vista view's Cliffside. The vehicle was positioned on its roof, sustained significant damage and the roof had subsequently collapsed. Personnel from the California Highway Patrol (CHP), Westport Volunteer Fire Department, Fort Bragg Volunteer Fire Department and Cal Fire were on the scene to assist in recovery efforts. There was a total of five decedents found during the initial recovery; two were inside the vehicle and the remaining three were located in the vicinity of the vehicle. The driver of the vehicle was subsequently identified as Jennifer Hart (please refer to MCSO18-08630-1) and the front seat passenger was subsequently identified as Sarah Hart (please refer to MCSO18-08630-2). The three other decedents who were in the vicinity of the vehicle were subsequently identified as Markis Hart, Abigail Hart (please refer to report MCSO18-08630-4) and Jeremiah Hart (please refer to report MCSO18-08630-5). It was later determined that three additional people were in the vehicle at the time of the accident, one of which washed ashore several weeks later and was subsequently identified as Ciera Hart (please refer to report MCSO18-09877). The other two passengers in the car, identified as Devonte Hart and Hannah Hart are still missing and have not been recovered at the time of this report. The CHP was investigating the accident (please refer to CHP report #9150-2018-00207). The decedent had an unknown past medical history. The autopsy is ordered by the Mendocino County Sheriff-Coroner.

**WITNESSES:** Outside observers include California Highway Patrol (CHP) Ukiah Investigator J. Slates, CHP Multidisciplinary Accident Investigation Team (MAIT) Officer T. Roloff. I am assisted by E.

Mandel.

**PRELIMINARY EXAMINATION:** The body is received secured in a red plastic pouch with the inscription "COR18-8630 John Doe #2 HMJ" on a preparatory table at Eversole Mortuary, Ukiah, CA. When first viewed at gross examination, the decedent is clad in (a) a light gray hoodie sweatshirt, (b) a black T-shirt, (c) dark gray briefs and (d) two olive green socks; all of which were eventually returned with the body.

**EVIDENCE OF MEDICAL THERAPY:** There is no medical therapy.

**EXTERNAL EXAMINATION:** The body is that of a well-developed, well-nourished, adolescent, Hispanic or African American male whose appearance is consistent with the reported given age of 19 years. The body presents a medium-set build.

The head is symmetric, normocephalic with several cutaneous injuries that will be described below. The scalp is intact and atraumatic, covered with short, straight black hair with a non-receding anterior hairline and without balding. There is slight body hair of male pattern distribution. The face is pale, shaven, normally formed, symmetric, and with several cutaneous injuries that will be described below. The nose and facial bones are intact by palpation. The eyelids are closed, intact and unremarkable. The conjunctivae are cloudy without petechial hemorrhages, pallor or icterus. The sclerae are white but congested, without petechial hemorrhages or icterus and the corneas are cloudy. The irides are brown, and the pupils are equally dilated at 5 millimeters. The orbits are unremarkable. The nose is symmetric with a cutaneous injury at the bridge of the nose that will be described below. The nares are unobstructed. The lips are normally formed. The mouth has native dentition in good repair, characterized by the absence of caries. The remaining oral mucosa is tan, moist, and unremarkable, without visible injury or palpable lesion. The frenula are intact. The external ears are normally formed, symmetric, and unremarkable, without visible injury or drainage. The left earlobe is pierced twice.

The neck is supple, normally formed, symmetric, and without visible injury or lesion. The trachea is palpable in the midline, symmetric and unremarkable. The chest is normally formed, symmetric, and with an abrasion on the left chest that will be described below. The abdomen is soft, flat and tympanic to percussion, with several cutaneous injuries that will be described below. The back is straight and symmetric, with multiple cutaneous injuries that will be described below. There are multiple skin impressions consistent with rocks on the right upper back, ranging in size from 1/8 to 1/4 inches in greatest diameter. The atraumatic external genitalia are those of a normally developed adolescent male. The penis is circumcised. The testes are palpable within the intact scrotum. The anus is patent, without visible injury or lesion.

The upper extremities are normally formed, symmetric, and unremarkable, with several cutaneous injuries that will be described below. There are no needle punctures or track marks. There are no ventral wrist scars. The fingernails are clean, trim, and do not extend beyond the fingertips. The lower extremities are normally formed, symmetric, and unremarkable, with multiple cutaneous injuries that will be described below. The lower extremities are free of edema. The toenails are clean, trim, and short.

## **IDENTIFYING MARKS AND SCARS:**

### **Scars:**

- Multiple scattered mostly linear scars on the anterior left leg, ranging in size from 1/16 to 3-1/4 inches.
- Multiple scattered mostly linear scars on the anterior right leg, ranging in size from 1/16 to 2-3/4 inches.
- A 1 inch old pigmented scar with excoriation on the right hip.
- Two ½ inch in diameter pigmented scars, one on the inferior aspect of each buttock.

**Tattoos:** None identified.

**EVIDENCE OF POSTMORTEM CHANGES:** The body is well preserved, cold (having been refrigerated), and has not been embalmed. Rigor mortis is fixed in the jaw and extremities. Livor mortis is pink-purple, fixed and in a posterior distribution.

**EVIDENCE OF INJURY:** There are multiple acute traumatic injuries which include the following:

- Scattered abrasions covering a surface area measuring 6-1/2 x 1 inch on the forehead and left temple.
- Scattered abrasions covering a surface area measuring 4 x 2-1/2 inches on the left face and bridge of the nose.
- A 1-1/4 x 1 inch abrasion on the lower chin.
- A 3/8 x ¼ inch abrasion on the right lower jaw.
- Scattered linear abrasions on the left lateral back, covering a surface area measuring 9 x 7-1/2 inches.
- Linear abrasions covering a surface area measuring 1-1/4 x 1 inches on the left lower chest.
- Scattered abrasions covering a surface area measuring 4 x 1-1/2 inches on the right posterior lower forearm and right elbow.
- A 3 x ¾ inch abrasion below the right elbow.
- A ¼ inch superficial abrasion on the dorsal right wrist.
- A 1 x ¾ inch contusion on the dorsal right hand.
- Scattered abrasions on the mid lower back, covering a surface area measuring 5-1/2 x 1-1/2 inches.
- A ¾ inch abrasion on the lateral left buttock.
- A 1 inch linear abrasion on the left buttock.
- A 1 x ½ inch abrasion on the left hip.
- Faint linear abrasions on the anterior left upper thigh, covering a surface area measuring 3 x ½ inches.
- Faint abrasions on the anterior left mid thigh, covering a surface area measuring 1-1/4 x 1 inch.
- Linear abrasions on the right lateral mid thigh, covering a surface area measuring 2 x 1-1/2 inches.
- Scattered abrasions on the anterior left lower thigh, covering a surface area measuring 2-1/4 x ¾ inches.
- Scattered abrasions on the left knee, covering a surface area measuring 2 x 1-1/2 inches.
- A 1-1/4 inch diagonal laceration on the anterior left leg.

- Old abrasions on the anterior right leg, covering a surface area measuring 1-1/2 x 1/2 inches.
- Recent and old abrasions on the lateral left ankle, covering a surface area measuring 1/4 x 3/16 inches.

***These injuries, having been described above, will not be repeated.***

**INTERNAL EXAMINATION:** The subcutaneous fat is approximately 0.4 centimeters in its maximum thickness at the mid-abdomen. There is an atlanto-occipital dislocation of the first and second cervical vertebrae. There are bilateral paravertebral thoracic hemorrhages but no thoracic fractures. The pleural cavities are free of adhesions. The right pleural cavity contains 550 milliliters of clear reddish serosanguinous fluid. The left pleural cavity contains 125 milliliters of clear reddish serosanguinous fluid. The visceral and parietal pleurae are intact and unremarkable with smooth, glistening surfaces. The pericardial sac is intact and unremarkable without abnormal fluid collection. The abdominal cavity is intact and unremarkable without excess fluid, hemorrhage, exudates, or adhesions. The thoracoabdominal organs are in their usual positions. The diaphragm is intact.

**NECK:** The neck is dissected in a layer-by-layer method after the thoracoabdominal and cranial contents are removed. The superficial and deep muscles of the neck are firm, red-brown, intact, and unremarkable, without hemorrhage or laceration. The soft, red-brown tongue is unremarkable without intramuscular hemorrhage, laceration, or infiltrate. The hyoid bone is intact without fracture or periosteal soft tissue hemorrhage. The thyroid and cricoid cartilages are intact without fracture or adjacent soft tissue hemorrhage. The mucosa of the larynx and trachea are unremarkable without intraluminal obstructive lesion, ulceration, laceration, or fistula. Froth is present on the larynx and main bronchi. There are bilateral thoracic prevertebral fascial hemorrhages but no underlying cervical or thoracic vertebral fractures.

**CARDIOVASCULAR SYSTEM:** The 220 gram heart has a smooth, glistening, unremarkable epicardium. The cardiac contour is unremarkable. The coronary arteries arise from the aorta in a normal fashion and follow their usual anatomic pathways. The coronary ostia are patent. The posterior interventricular septum receives its blood supply from the left circumflex coronary artery. The coronary arteries are patent and have no significant atherosclerosis. There is no occlusive thrombus of the epicardial vessels. The myocardium is red-brown, firm, and uniform, without focal fibrosis, softening, or hyperemia. The right ventricle, left ventricle, and interventricular septum measure 0.4 cm, 1.0 cm, and 1.0 cm respectively. The endocardium is intact, smooth, and glistening, without thickening or fibrosis. The valve cusps and leaflets are of normal number, pliable, intact, and free of vegetations. The chordae tendineae are thin and delicate. The papillary muscles are intact. Valvular circumferential measurements are tricuspid 9.0 cm, pulmonic 6.0 cm, mitral 8.5 cm, and aortic 6.0 cm. The cardiac chambers are normally dilated. The atrial and ventricular septa are free of defects. The aorta and its major branches have normal pathways and are unremarkable, without atherosclerosis. There are no vascular anomalies or aneurysms. The venae cavae and major veins are all patent, intact, and unremarkable, with smooth, yellow-tan intima.

**RESPIRATORY SYSTEM:** The right and left lungs weigh 680 grams and 650 grams, respectively, and

have the usual lobation. The pleural surfaces are smooth and glistening. The lungs have slight anthracotic pigment. The parenchyma is dark red, subcrepitant, severely congested and moderately edematous. The lungs have no consolidation, hemorrhage, infarct, tumor, gross fibrosis, or enlargement of airspaces. The tracheobronchial tree has pink-tan, unremarkable mucosa and is patent without intraluminal obstructive lesion. The pulmonary vessels are patent and have a yellow-tan, smooth intima without thromboemboli.

**HEPATOBIILIARY SYSTEM:** The 1110 gram liver has a smooth, intact capsule with a sharp anterior margin. The hepatic parenchyma is red-brown, congested, and uniform without yellow discoloration, palpable fibrosis, hemorrhage, or mass lesion. The hepatic artery and portal vein are patent and intact. The gallbladder is intact and contains approximately 10 milliliters of dark green, viscid bile without calculi. The gallbladder wall is thin and uniform, with a velvety, green mucosa.

**HEMATOPOIETIC SYSTEM:** The 80 gram spleen is intact and has a smooth, gray, translucent capsule. The splenic pulp is moderately firm, purple-red, and unremarkable, with conspicuous corpuscles. The thymus weighs 10 grams and is unremarkable. The thoracoabdominal and cervical lymph nodes are not enlarged. The visible bone marrow is unremarkable.

**ENDOCRINE SYSTEM:** The pituitary gland is intact, normally developed, and unremarkable without laceration, hemorrhage, or mass lesion. The thyroid gland is symmetric and unremarkable, with a firm, red-brown, granular parenchyma without cyst, hemorrhage, fibrosis, or mass lesion. The adrenal glands are normally situated and have soft, yellow cortices and soft, gray-brown medullae. The pancreas weighs 90 grams and has a soft, tan parenchyma with a normal lobular architecture without saponification, pseudocyst, neoplasm, fibrosis, hemorrhage, or mineralization.

**GASTROINTESTINAL SYSTEM:** The oropharynx has a tan, smooth, unremarkable mucosa. The laryngopharynx has a tan, smooth, unremarkable mucosa, without erythema, ulceration, or mass lesion. The esophagus has a smooth, mildly congested reddish-tan mucosa. The stomach has a smooth, tan serosa and a smooth, mildly congested reddish-tan mucosa with normal rugal folds. The gastric wall is not thickened or indurated. The gastric contents consist of approximately 500 milliliters of clear, viscid fluid with whitish mucoïd material. The stomach does not contain identifiable tablets, capsules, or pill fragments. The duodenum has a smooth, bile-stained mucosa without ulcers. The small intestine has a smooth, tan serosa and is not dilated or obstructed. The large intestine has normal haustral markings and a vermiform appendix without descending or sigmoid colonic diverticula. The rectum has a smooth, tan mucosa.

**GENITOURINARY SYSTEM:** The right and left kidneys weigh 90 grams and 110 grams, respectively. The renal capsules are intact and strip with ease from the underlying cortices. The kidneys have smooth cortical surfaces without persistent fetal lobulations. The renal parenchyma is firm, congested, dark red-brown, and has a good corticomedullary definition with an average cortical thickness measuring 0.6 cm. The pyramids and papillae are unremarkable. The pelvicalyceal systems are normal without dilatation or obstruction. The ureters are normal in course and caliber to the urinary bladder. The renal arteries and veins are unremarkable. The urinary bladder is intact but distended with a smooth, tan mucosa without

thickening, erythema, hemorrhage, ulcer, or mass lesion. The urinary bladder contains approximately 300 milliliters of clear, yellow urine.

The prostate gland is not enlarged and has a soft, tan parenchyma without discoloration, induration, or necrosis. The seminal vesicles are normal. The right and left testes are normally situated in the scrotum without palpable mass lesion, and the testicular parenchyma is not examined.

**MUSCULOSKELETAL SYSTEM:** The musculoskeletal system is well developed and free of deformity. The skeletal muscle is red-brown and firm, without focal lesions. The skeleton is normally developed and without fractures. The cervical spinal column is unstable with free neck movement due to the atlanto-occipital dislocation described previously.

**HEAD AND CENTRAL NERVOUS SYSTEM:** The reflected scalp shows left parietal subcutaneous and bilateral parietal subgaleal hemorrhage. The remaining galeal soft tissues and temporalis muscles are intact and unremarkable. The calvarium is intact and without fracture. The dura mater is intact and unremarkable. The epidural and subdural spaces are free of blood. The 1380 gram brain has minimal to mild global edema but with symmetric cerebral and cerebellar hemispheres covered by thin, congested, transparent leptomeninges, without subarachnoid hemorrhage, exudate, or cortical contusions. The cerebral cortex is tan and uniform, with a normal gyral pattern. There is no flattening of the gyri, narrowing of the sulci, midline shift, or evidence of herniation. The cerebral white matter is uniform throughout. The caudate nuclei, basal ganglia, and thalami are tan, uniform, and symmetric. The ventricles are normal in caliber and contain clear, colorless cerebrospinal fluid and congested choroid plexus. The midbrain, cerebellum, pons, and medulla oblongata are free of abnormalities. The substantia nigra is normally pigmented. The cranial nerves and mammillary bodies are symmetric and unremarkable. The arteries at the base of the brain are free of atherosclerosis and aneurysms. The anterior, middle, and posterior cranial fossae are free of fractures. The proximal cervical spinal cord is firm and symmetric with the presence of the atlanto-occipital dislocation described previously.

The remaining spinal cord is not examined.

**SPECIMENS RETAINED:**

**RETAINED TISSUE:** Representative sections of major organs and other tissues are collected in formalin and retained.

**TOXICOLOGY:** Samples of central blood, vitreous humor, bile, urine, and liver are collected and sent for toxicology.

**PHOTOGRAPHS:** Full body overall photographs and photographs of the cutaneous injuries, skull and brain are taken by CHP MAIT Officer T. Roloff and E. Mandel.

**RADIOGRAPHS:** No radiographs are taken.

EVIDENCE: Evidence taken includes a blood spot on FTA filter paper.

**AUTOPSY FINDINGS:**

1. Atlanto-occipital dislocation of the first and second cervical vertebrae.
2. Left parietal subcutaneous and bilateral parietal subgaleal hemorrhage.
3. Paravertebral thoracic hemorrhage, bilateral, with absence of thoracic fractures.
4. Presence of froth in larynx and main bronchi.
5. Pleural effusions, bilateral, serosanguinous type (125 ml left, 550 ml right).
6. Multiple acute traumatic cutaneous injuries.
7. Pulmonary vascular congestion, bilateral, severe, with moderate edema.
8. Generalized visceral congestion.
9. **Toxicology:** Presence of Diphenhydramine in the peripheral blood (Please refer to separate Toxicology report).

**CAUSE OF DEATH: ATLANTO-OCCIPITAL DISLOCATION (SECONDS)**

**DUE TO: MOTOR VEHICLE ROLLOVER OVER CLIFF WITH EJECTION (SECONDS)**

**OTHER SIGNIFICANT CONDITIONS: DIPHENHYDRAMINE PRESENT**

A handwritten signature in blue ink, appearing to read 'Greg B. Pizarro, M.D.', with a stylized flourish at the end.

Greg B. Pizarro, M.D.  
Pathologist

Electronically signed under the express direction of Greg Pizarro, M.D. on 8/6/2018