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# Franklin County Forensic Science Center

Office of the Coroner Anahi M. Ortiz, M.D. 2090 Frank Road

Columbus, Ohio 43223

# **Postmortem Examination Report**

Case Number: LAB-20-5315

Name, gender, age: Casey Goodson, Male, 23 Years

**Date of Birth:** January 30, 1997

Date and time pronounced:

December 4, 2020 @ 1310 hours

Date and time of examination:

December 7, 2020 @ 0905 hours

**Examination Type:** Autopsy

**Examination performed by:** Anne M. Shepler, M.D. Forensic Pathologist

# FINDINGS AND DIAGNOSES

- I. Gunshot wound of the midline mid-back
- A. Entrance: Mid-back at the posterior midline
- B. Range: Indeterminate
- C. Injuries: Skin, soft tissue, left ribs, T7-T9 vertebrae, and left lung; left hemothorax (clinical history), additional vertebral fractures, epidural, subdural, subarachnoid, and petechial hemorrhages of the spinal cord, and hemoaspiration
- D. Exit: Superior left side of the chest
- E. Recovery: Projectile fragments from the chest wall soft tissue; see "Additional Recovery"
- F. Trajectory: Back to front, right to left, and upward
- II. Gunshot wound of the mid-back
- A. Entrance: Mid-backB. Range: Indeterminate
- C. Injuries: Skin, soft tissue, left ribs, T10 vertebra, left lung, and heart; left hemothorax (clinical history), additional vertebral fractures, epidural, subdural, subarachnoid, and petechial hemorrhages of the spinal cord, and hemoaspiration
- D. Exit: Left areola
- E. Recovery: See "Additional Recovery"
- F. Trajectory: Back to front, right to left, and upward
- III. Gunshot wound of the left side of the back
- A. Entrance: Left side of the back
- B. Range: Indeterminate
- C. Injuries: Skin and soft tissue; fractures of left ribs
- D. Exit: Left side of the lateral chest
- E. Recovery: Projectile fragment from the chest wall soft tissue
- F. Trajectory: Back to front, slightly upward, and slightly right to left

IV. Tangential gunshot wound of the inferior left side of the back

A. Entrance: Left side of the inferior back

B. Range: Indeterminate

C. Injuries: Skin and superficial soft tissue of the back

D. Trajectory: Right to left and upward

V. Gunshot wound of the inferior right side of the back

A. Entrance: Inferior right side of the back

B. Range: Indeterminate

C. Injuries: Skin, soft tissue, L3-L5 vertebrae, small bowel, pancreas, liver, left hemidiaphragm, and left lung; epidural, subdural, subarachnoid, and petechial hemorrhages of the spinal cord, right periadrenal soft tissue hemorrhage, focal gastric mucosal hemorrhage, intestinal leakage, and left rib fracture

D. Recovery: Deformed projectile from the subcutaneous tissue of the left side of the chest; a projectile fragment from the musculature of the right pelvis

E. Trajectory: Back to front, right to left, and upward

VI. Gunshot wound of the right buttock

A. Entrance: Right buttock

B. Range: Indeterminate

C. Injuries: Skin, soft tissue, right ischial spine, small bowel, and urinary bladder; intestinal and urinary bladder leakage

D. Recovery: Deformed projectile and projectile fragment from the subcutaneous tissue of the left side of the abdomen

E. Trajectory: Back to front, right to left, and upward

#### VII. Fragment type injuries

A. Multiple, scattered, and variably sized superficial penetrations and abrasions of the back, buttocks, and posterior aspect of the left arm

i. Copper-colored metallic fragments are recovered from a subset of the wounds

#### VIII. Additional minor injuries

- A. Abrasions of the forearms, left elbow, and left hand
- B. Contused superficial laceration of the left forearm

# IX. Additional recovery

- A. A projectile fragment is recovered from the left pleural cavity
- B. A gray metal fragment is recovered external to the left lower extremity

# X. Recent medical therapy

Cause of death: Gunshot wounds of the torso

Manner of death: Homicide

# POSTMORTEM EXAMINATION

#### **IDENTIFICATION**

The body is positively identified by fingerprints. An identification band bearing the decedent's case identifier(s) is on the body. A hospital identification band bearing the decedent's name and "5005951036" encircles the right wrist.

#### **CLOTHING**

The body is received nude. Brown paper bags are over the hands; these are submitted to the investigating agency.

#### **EXTERNAL EXAMINATION**

The body is that of a normally developed adult male which appears consistent with the stated age of 23 years. The body measures 74 inches in length and weighs 148 pounds. There is good preservation in the absence of embalming. Rigor mortis is partially fixed and faint lividity is on the posterior surfaces. The body is cold subsequent to refrigeration.

The scalp hair is black, long, and fashioned into braids. A mustache and beard are present. The irides appear brown and there are no petechiae of the bulbar or palpebral surfaces of the conjunctivae. The corneas are mildly cloudy. The ears, nose, and lips are normally developed. The mouth has natural dentition in poor condition. The neck is without masses and is stable upon palpation. The chest and back are normally developed. The abdomen is flat. The extremities are symmetric. A ¼ inch superficial erosion/ulcer with circumferential scar is on the anterior aspect of the left leg. The external genitalia are those of an adult male.

### **IDENTIFYING MARKS AND SCARS**

Hyperpigmented macules and patches ranging from 3/16 to 1 3/4 inches are on the left side of the neck, posterior left shoulder, right side of the chest, right side of the back, left arm, and left and right forearms. A 1 1/2 inch linear scar is on the posterior aspect of the right forearm. A 3/8 inch scar is on the left hip. A 2 inch scar is on the anterior aspect of the right forearm. Non-specific scars are on the superior back.

#### EVIDENCE OF TREATMENT

An endotracheal tube extends into the oral cavity and is secured by a face strap. A 9  $\frac{1}{2}$  inch sutured thoracotomy incision is on the left side of the chest with an associated ecchymosis ( $\frac{3}{4}$  inch) on the central chest. An intravascular catheter extends into the superior right side of the chest. An intravascular catheter extends into the right groin. An intraosseous catheter extends into the right leg.

Internally, the thoracotomy incision extends through the left anterior and lateral 3rd intercostal space. The sternum is fractured. The pericardial sac is received opened.

#### EVIDENCE OF INJURY

I. Gunshot wound of the midline mid-back: An atypical entrance gunshot wound, (labeled as "D" in photographs) is located on the mid-back at the posterior midline, centered approximately 17 inches below the top of the head. The ovoid wound measures  $11/16 \times 1/2$  inch and has a prominent eccentric marginal

abrasion measuring up to 3/8 inch at the 9 o'clock position. No soot or stippling is identified on the skin surrounding the gunshot wound. The bullet disrupts the skin, subcutaneous tissue, and musculature of the back, posterior left 8th and 9th ribs and 8th intercostal space, the left transverse processes of the seventh, eighth, and ninth thoracic (T7, T8, and T9) vertebrae, lower and upper lobes of the left lung through the hilum, and left 2nd intercostal space before exiting through the musculature, subcutaneous tissue, and skin of the superior left side of the chest. An exit gunshot wound (labeled as "A" in photographs) is located on the superior left side of the chest, centered approximately 14 1/4 inches below the top of the head and 2 <sup>3</sup>/<sub>4</sub> inches to the left of the anterior midline. The ovoid 5/8 x 5/16 inch wound has no abrasion border. Skin tears up to 1/16 inch are at the 1 and 7 o'clock positions. No soot or stippling is identified on the skin surrounding the gunshot wound. Associated findings include blood in the left (20 mL, residual status post thoracotomy) and right (20 mL, status post thoracotomy) pleural cavities, fractures of the spinous processes of the seventh, eighth, and nineth thoracic (T7, T8, T9) vertebrae, epidural, subdural, subarachnoid, and petechial hemorrhages of the spinal cord, and hemoaspiration. Projectile fragments are recovered from the chest wall soft tissue near the exit wound. The projectile fragments are photographed (as "upper L chest" and "additional from L upper arm"), packaged (labeled as "fragment from L upper chest" and "additional fragments from L upper chest"), sealed, and submitted to the investigating agency. See "Additional recovery." The trajectory is anatomically from back to front, right to left, and upward.

II. Gunshot wound of the mid-back: An atypical entrance gunshot wound (labeled as "E" in photographs) is located on the mid-back, centered approximately 19 ½ inches below the top of the head and ¾ inch to the left of midline. The ovoid wound measures 13/16 x ½ inch and has a 1/8 inch wide, concentric marginal abrasion with circumferential skin splits most prominent at the 4 o'clock and 10 o'clock positions where they measure up to 3/16 inch. No soot or stippling is identified on the skin surrounding the gunshot wound. The bullet disrupts the skin, subcutaneous tissue, and musculature of the back, posterior left 10th and 11th ribs and 10th intercostal space, the left transverse process of the tenth thoracic (T10) vertebra, lower and upper lobes of the left lung, left ventricle of the heart, anterolateral left 4th intercostal space and anterolateral left 5th rib before exiting through the musculature, subcutaneous tissue, and areolar tissue of the left side of the chest. An exit gunshot wound (labeled as "B" in photographs) is on located on the left areola, centered approximately 18 ½ inches below the top of the head and 3 ¾ inches to the left of midline. The 5/16 x ½ inch wound has no abrasion border. No soot or stippling is identified on the skin surrounding the gunshot wound. Associated findings include blood in the left (20 mL, residual status post thoracotomy) and right (20 mL, status post thoracotomy) pleural cavities, fractures of the spinous processes of the nineth and tenth thoracic (T9 and T10) vertebrae, epidural, subdural, subarachnoid, and petechial hemorrhages of the spinal cord, and hemoaspiration. See "Additional recovery." The trajectory is anatomically from back to front, right to left, and upward.

III. Gunshot wound of the left side of the back: An atypical entrance gunshot wound (labeled as "F" in photographs) is located on the left side of the back, centered approximately 19 3/4 inches below the top of the head and is 4 ½ inches to the left of midline. The ovoid wound measures 1 x ½ inch and has a ½ inch eccentric abrasion border from the 4 to 5 o'clock positions with circumferential skin splits most prominent at the 10 o'clock position. No soot or stippling is identified on the skin surrounding the gunshot wound. The bullet disrupts the skin, subcutaneous tissue, and musculature of the back and exits through the musculature, subcutaneous tissue, and skin of the lateral left side of the chest. There is no entrance into the thoracic cavity. An exit gunshot wound (labeled as "C" in photographs) is located on the lateral aspect of the left side of the chest, centered approximately 18 5/16 inches below the top of the head and 6 inches to

the left of midline. The irregular, lacerated wound measures 1 x ½ inch and has a 1/8 inch skin tag at the 5 o'clock position. The wound has no abrasion border. No soot or stippling is identified on the skin surrounding the gunshot wound. Associated injuries include fractures of the posterolateral left 9th and 10th ribs. A projectile fragment is recovered from the left lateral chest wall soft tissue. The projectile fragment is photographed, packaged, sealed, and submitted to the investigating agency. The trajectory is anatomically from back to front, slightly upward, and slightly right to left.

IV. Tangential gunshot wound of the inferior left side of the back: A tangential gunshot wound (labeled as "G" in photographs) is located on the inferior left side of the back, centered approximately 27 ½ inches below the top of the head and 4 ½ inches to the left of midline. The elliptical wound measures 4 ¾ x 1 ¼ inches and has a skin tag at the 8 o'clock position pointing medially and inferiorly. No soot or stippling is identified on the skin surrounding the gunshot wound. The bullet disrupts the skin and superficial soft tissue of the back. The trajectory is anatomically from right to left and upward.

V. Gunshot wound of the inferior right side of the back: An atypical entrance gunshot wound (labeled as "H" in photographs) is located on the inferior right side of the back, centered approximately 27 \(^3\)4 inches below the top of the head and 2 \( \frac{3}{4} \) inches to the right of midline. The round wound measures \( \frac{3}{4} \) inch in diameter and has circumferential marginal abrasion up to 3/16 inch and a 1/8 inch skin tag at the 12 o'clock position. No soot or stippling is identified on the skin surrounding the gunshot wound. The bullet disrupts the skin, subcutaneous tissue, and musculature of the back, the third, fourth and fifth lumbar (L3, L4, and L5) vertebrae, right psoas muscle, mesentery, small bowel, pancreas, liver (left lobe), left hemidiaphragm, lower lobe of the left lung, and through the anterior left 3rd intercostal space (disrupted by the thoracotomy incision), where it comes to rest in the subcutaneous tissue of the left side of the chest. Associated findings include epidural, subdural, subarachnoid, and petechial hemorrhages of the spinal cord, right periadrenal soft tissue hemorrhage, focal gastric mucosal hemorrhage, intestinal leakage, and a partial fracture of the anterior left 6th rib. A deformed projectile is recovered from the subcutaneous tissues of the left side of the chest. An additional projectile fragment is recovered from the musculature of the right pelvis. The projectile and projectile fragment are photographed, weighed (deformed projectile only), packaged, sealed, and submitted to the investigating agency. The trajectory is anatomically from back to front, right to left, and upward.

VI. Gunshot wound of the right buttock: An atypical entrance gunshot wound (labeled as "I" in photographs) is located on the right buttock, centered approximately 33 ¼ inches below the top of the head and 3 inches to the right of midline. The irregular-shaped wound measures ¾ x 9/16 inch and has an eccentric marginal abrasion up to 3/16 inch from the 7 to 11 o'clock positions. No soot or stippling is identified on the skin surrounding the gunshot wound. The bullet disrupts the skin, subcutaneous tissue, and musculature of the right buttock, right ischial spine, small bowel, and urinary bladder before coming to rest in the subcutaneous tissue of the inferior left side of the abdomen. Associated findings include intestinal and urinary bladder leakage. A deformed projectile and projectile fragment are recovered from the subcutaneous tissue of the left side of the abdomen. The projectile and fragment are photographed, weighed, packaged, sealed, and submitted to the investigating agency. The trajectory is anatomically from back to front, right to left, and upward.

VII. Fragment type injuries: Scattered 1/8 to  $\frac{1}{2}$  inch superficial penetrations and abrasions are over an approximate area of  $20 \times 10$  inches on the posterior aspect of the left arm, back and buttocks. Recovered

from a subset of these wounds are copper-colored metallic fragments which are photographed, packaged, sealed, and submitted to the investigating agency.

VIII. Additional minor injuries: Tan linear abrasions, each 1 inch in length, are on the posterior aspects of the right and left forearms. A 1/8 inch abrasion is on the posterior left hand. A 3/16 inch abrasion is on the left elbow. A 3/16 inch contused superficial laceration is on the anterior aspect of the left forearm.

IX. Additional recovery: A gray metal fragment is recovered external to the left lower extremity. A projectile fragment is recovered from the left pleural cavity; due to the proximity of the gunshot wounds of the mid-back (I and II described above), the associated gunshot wound of the fragment cannot be determined. These fragments are photographed, packaged, sealed, and submitted to the investigating agency.

# **RADIOLOGY**

Full-body x-rays are taken. A postmortem CT scan of the head, neck, chest, abdomen, and pelvis is also performed.

#### INTERNAL EXAMINATION

BODY CAVITIES: See "Evidence of Injury." The thoracic and abdominal organs are in their normal anatomic positions. The body cavities contain no adhesions.

CENTRAL NERVOUS SYSTEM: See "Evidence of Injury." The brain weighs 1480 grams. The scalp, subscalpular area, and skull are unremarkable. The dura and dural sinuses are unremarkable. There are no epidural, subdural or subarachnoid hemorrhages. The leptomeninges are thin and delicate. The cerebral hemispheres are symmetrical, with an unremarkable gyral pattern. The cranial nerves and blood vessels are unremarkable. Sections through the cerebral hemispheres, brainstem, and cerebellum are unremarkable. There are no hemorrhages within the deep white matter or the basal ganglia. The cerebral ventricles contain no blood. The spinal cord is accessed via an anterior approach revealing injury as described under "Evidence of Injury."

NECK: The soft tissues, large vessels, and prevertebral fascia are unremarkable. The hyoid bone and laryngeal cartilages are intact. The lumen of the larynx is not obstructed. The lingual mucosa is intact and there is no hemorrhage within the underlying musculature.

CARDIOVASCULAR SYSTEM: See "Evidence of Injury." The heart weighs 280 grams. The intimal surface of the aorta has mild atherosclerosis. The aorta and its major branches and the great veins are normally distributed and unremarkable. The pulmonary arteries contain no thromboemboli. There are no thrombi in the atria or ventricles. A 4 cm length segment of the left anterior descending coronary artery is intramuscular (0.2 cm depth). The coronary arterial system is free of significant atherosclerosis. The cardiac valves are unremarkable. The uninjured myocardium is dark red-brown and firm. The right, left, and septal ventricular walls are 0.2-0.3 cm, 1.3 cm, and 1.3 cm thick, respectively.

RESPIRATORY SYSTEM: See "Evidence of Injury." The right and left lungs weigh 400 and 380 grams, respectively. The upper airway is not obstructed. The laryngeal mucosa is smooth and unremarkable,

without petechiae. Except as described under "Evidence of Injury," sectioning of the lungs discloses a dark red-blue, moderately congested parenchyma.

HEPATOBILIARY SYSTEM: See "Evidence of Injury." The liver weighs 1140 grams. The uninjured hepatic parenchyma is dark red-brown and moderately congested. The gallbladder contains approximately 40 ml of dark green bile, with no calculi.

GASTROINTESTINAL SYSTEM: See "Evidence of Injury." The esophageal mucosa is gray, smooth, and unremarkable. The stomach contains approximately scant brown mucoid fluid. There are no tablets or capsules. The gastric mucosa has normal rugal folds, and there are no ulcers. The appendix is present.

GENITOURINARY SYSTEM: See "Evidence of Injury." The right and left kidneys weigh 110 and 120 grams, respectively. The capsules of both kidneys strip with ease to reveal smooth and slightly lobulated surfaces. The cortices are of normal thickness, with well-demarcated corticomedullary junctions. The calyces, pelves, and ureters are unremarkable. The urinary bladder contains approximately 3 ml of clear yellow urine. The prostate gland is unremarkable both externally and upon sectioning.

LYMPHORETICULAR SYSTEM: The spleen weighs 110 grams. The spleen is covered by a smooth, blue-gray, intact capsule. The parenchyma is dark red. The cervical, hilar, and peritoneal lymph nodes are not enlarged.

ENDOCRINE SYSTEM: See "Evidence of Injury." The thyroid and left adrenal glands are unremarkable externally and upon sectioning.

MUSCULOSKELETAL SYSTEM: See "Evidence of Injury." The clavicles have no fractures.

# **ANCILLARY STUDIES**

A postmortem nasopharyngeal swab for SARS-CoV-2 nucleic acid (collected 12/4/2020, performed by the Ohio State University Wexner Medical Center lab) was not detected.

# **TOXICOLOGY**

See separate toxicology report.

# MICROSCOPIC EXAMINATION

At this time, no microscopic slides have been prepared. Representative portions of all major organs are retained in formalin. These tissues are available for the examination of microscopic slides as a further aid to diagnosis, should this become necessary at a future time.

03/16/2021

Anne M Shepler, M.D., Deputy Coroner

Forensic Pathologist