



OFFICE OF THE MEDICAL EXAMINER
701 W. Jefferson St.
Phoenix, AZ 85007

MEDICAL EXAMINER REPORT

DECEDENT: Travis Carter

CASE: 13-04433

DATE OF EXAMINATION: 07/02/2013

TIME: 0805 Hours

PATHOLOGICAL DIAGNOSES OR SIGNIFICANT FINDINGS

- I. Thermal injuries.
 - A. Predominantly 3rd and 4th degree burns with 100 percent of entire body surface involved.
 - B. No evidence of soot deposit in upper airways.
 - C. Carboxyhemoglobin (11% saturation).

CAUSE OF DEATH: Fire related injuries
MANNER: Accident

08.05.2013
Date Signed


VLADIMIR SHVARTS, MD
MEDICAL EXAMINER

TRAVIS CARTER

13-04433

CIRCUMSTANCES OF DEATH

On July 1, 2013, Yavapai County officials requested assistance from the Maricopa County Office of the Medical Examiner with the medicolegal death investigations of 19 firefighters who died in the Yarnell Hill wildfire on June 30, 2013. Under the Maricopa County Manager's authority and direction, the Maricopa County Office of the Medical Examiner examined the firefighters' remains for the purpose of forensic identification and postmortem evaluation. The Maricopa County Office of the Medical Examiner also agreed to provide consultative services to investigating authorities and the Yavapai County Medical Examiner. The Yavapai County Medical Examiner agreed it will certify the firefighters' death certificates. The following Maricopa County Office of the Medical Examiner case numbers were designated for this incident: 13-04425, 13-04426, 13-04427, 13-04428, 13-04429, 13-04430, 13-04431, 13-04432, 13-04433, 13-04434, 13-04435, 13-04436, 13-04437, 13-04438, 13-04439, 13-04440, 13-04441, 13-04442, and 13-04443.

EXTERNAL EXAMINATION

The body is received in a zippered body pouch secured by evidence seal #026593.

CLOTHING AND PERSONAL EFFECTS

The body is present in the personal fire shelter, which is opened on the front. It shows melted aluminum foil with attached dry soil and rocks. There are multiple defects present but the shelter is mostly intact on the back. There are multiple items of protective equipment and clothing present as follows:

1. Two brown boots, size unknown. The shoelaces on the left boot are burned. The right boot is mostly intact.
2. Remnants of the pants, size 32-36 short.
3. Remnants of shorts, size unknown.
4. Multiple loose fabric fragments.
5. Two pairs of black socks.
6. Gray boxer briefs, size medium.

There are also some tools and personal property items present as follows:

1. Remnants of a spiral notebook.
2. Black-metal screwdriver.
3. Black-metal file.
4. Orange-wedge tool.
5. Wrench and screwdriver.
6. Pair of black sunglasses.
7. White-metal key ring with three metal keys and one black knife. There are letters "TRAV" engraved on the side of the pocket knife.

TRAVIS CARTER

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Evidence of Thermal Injuries

The body is in a pugilistic position. Almost the entire body is covered by soot. The head, torso, and most of the upper extremities exhibit 4th degree burns with extensive areas of tissue loss. There is a large defect on the left side of the abdominal wall with protruding burnt loops of intestines. Both hands exhibit heat-related fractures of the phalanges. The lower legs show predominantly 3rd degree burns with some preserved areas in the feet and ankles.

SCARS, TATTOOS, AND OTHER IDENTIFYING BODY FEATURES

None.

GENERAL EXTERNAL EXAMINATION

The charred remains are those of a male measuring 72-1/2 inches in length. The body exhibits heat-related contractures. No head hair is present. The color of the irides cannot be determined. Dentition is natural. There are no acute oral mucosal lesions. The tip of the tongue is present between the teeth. The thorax is well developed and symmetrical. The abdomen shows protruding intestines as previously described. The external genitalia are those of a male. The extremities show extensive burns.

INTERNAL EXAMINATION

The body is opened by a standard Y-shaped thoracoabdominal incision. All viscera occupy their appropriate anatomic relationships. The right pleural cavity contains approximately 200 mL of hemorrhagic fluid. The left pleural cavity contains 100 mL of hemorrhagic fluid. Subcutaneous adipose tissue ranges up to 0.2 cm in thickness over the abdominal wall. There are no adhesions present.

CARDIOVASCULAR SYSTEM

The 350-gram heart occupies its usual mediastinal site. The external configuration is not remarkable. The epicardial surfaces are smooth. All major vessels arise in their appropriate anatomic relationships. The coronary arteries arise normally and are distributed in a left dominant pattern. They show no significant atherosclerosis. The myocardium is firm and red-brown, without areas of softening, hemorrhage, or gross scarring. Cardiac chambers are not dilated. Ventricular thicknesses are: left 1.5 cm, right 0.5 cm, and 1.4 cm in the interventricular septum. The cardiac valves have thin, pliable leaflets. The valve circumferences are appropriate to the caliber of the cardiac chambers. The valve cusps and surfaces are free of fusion or vegetations.

The aorta is of normal caliber, with all major arterial branches arising in their appropriate anatomic relationship. It shows no significant atherosclerosis, aneurysm formation, or dissection. No systemic venous abnormalities or thrombi are present.

RESPIRATORY SYSTEM

The lungs weigh 950 grams left and 920 grams right. The pleural surfaces are smooth. The lungs are distended. The parenchyma is dark brown and soft with no areas of consolidation, hemorrhage or gross scarring. The bronchi are patent and of normal caliber. There is no evidence of soot deposit on the bronchial mucosa. The pulmonary vessels are patent and of normal caliber. The upper airway is patent with no evidence of obstruction or aspiration. There is no gross evidence of soot noted on the laryngeal and tracheal mucosa.

DIGESTIVE/HEPATOBIILIARY SYSTEM

The oropharynx is grossly normal and unobstructed. The esophagus is of normal caliber, with a smooth mucosal lining. The gastroesophageal junction is well defined. The stomach has intact mucosal surfaces and the lumen contains approximately 325 mL of tan fluid with partially digested food. No areas of ulceration, hemorrhage, or scarring are present. A part of the small intestine is protruding through the abdominal wall defect. It shows brown discoloration, consistent with heat exposure. The appendix is present. The pancreas is autolyzed with no gross focal lesions.

The liver weighs 1625 grams. The capsule is intact. The parenchyma is dark brown and soft. No localizing masses or areas of hemorrhage are evident on external or cut surfaces. The intrahepatic and extrahepatic ducts are patent and of normal caliber. The gallbladder contains viscid bile. The gallbladder mucosa is grossly normal.

GENITOURINARY SYSTEM

The kidneys weigh 150 grams left and 135 grams right. They are grossly similar. The capsules strip with ease from the smooth, red-brown cortical surfaces. The cortices are sharply delineated from the medullary pyramids. The calyces, pelves and ureters are unremarkable. The renal vessels are patent and of normal caliber.

The urinary bladder contains approximately 100 mL of yellow urine. The mucosal surfaces are flat and pink-tan. The prostate and seminal vesicles are not remarkable.

HEMATOPOIETIC SYSTEM

The spleen weighs 225 grams. The capsule is intact. The parenchyma is red-brown and soft. Regional lymph nodes have their usual distribution and appearance.

ENDOCRINE SYSTEM

The thyroid, parathyroid and adrenal glands are grossly not remarkable.

TRAVIS CARTER

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NECK

The cervical spine is structurally intact. The hyoid bone and thyroid cartilage are intact. There are no hemorrhages in the strap muscles or soft tissues of the neck.

MUSCULOSKELETAL SYSTEM

There are no gross skeletal abnormalities. The muscles are well developed and show heat-related changes.

NERVOUS SYSTEM

The scalp is reflected in the usual fashion. There are no contusions, lacerations, or abrasions. There is no skull fracture. There is a 5 x 1 cm collection of brown-yellow soft substance in the epidural space over the top of the brain consistent with heat-related artifact. The brain weighs 1250 grams. The leptomeninges are congested. There is no evidence of subdural hemorrhage. There is good preservation of cerebral symmetry without flattening of gyri or widening of sulci. Convolutional patterns remain intact. The brain tissue is soft with no evidence of either diffuse or localized swelling. The cerebral vessels are intact with no evidence of aneurysm or significant atherosclerosis. Multiple sections of the brain reveal no injuries or other gross focal lesions. The ventricles contain clear liquid. The atlanto-occipital articulation is intact.

EVIDENCE

The following items of evidence are collected:

1. Personal fire shelter.
2. Remnants of personal protective equipment.
3. Tools.

MICROSCOPIC EXAMINATION

Kidney: No evidence of nephrosclerosis.

TOXICOLOGY SPECIMENS

Samples of blood, vitreous fluid, bile, gastric contents, urine, lung, brain, spleen, liver, kidney, and muscle are collected and submitted for toxicological testing.

FINAL SUMMARY

Based on the autopsy findings and investigative history, as available to me, it is my opinion that Travis Carter, a 31-year-old Caucasian firefighter, died as a result of thermal injuries sustained when he participated in liquidation of the wildfire.

The manner of death is accident.

TRAVIS CARTER

13-04433

VS/hyf

D: 7/02/13

T: 7/03/13

The Maricopa County Medical Examiner's Office is required by statute (A.R.S. § 11-594(A)(2) and (4)) to certify the cause and manner of death following completion of the death investigation of each case over which it assumes jurisdiction, and to promptly execute a death certificate, on a form provided by the state registrar of vital statistics, indicating the cause and manner of death. The form provided by the state registrar of vital statistics includes five manners of death: homicide, suicide, accident, natural, and undetermined. The determination of manner of death is a forensic determination by the pathologist predicated upon the totality of all then-known forensic evidence and other circumstances surrounding the cause of death; it is not a legal determination of criminal or civil responsibility of any person(s) for the death.

MARICOPA COUNTY OFFICE OF THE MEDICAL EXAMINER

REPORT OF TOXICOLOGICAL EXAMINATION

Case Number: 13-04433
Decedent: TRAVIS CLAY CARTER
Date Submitted: 07/02/2013
Report Date: 07/26/2013

Specimens Collected: KNOWN PUBIC HAIR, NASAL CAVITY SWABS, VITREOUS, SUBCUTANEOUS ADIPOSE TISSUE, IVC BLOOD, CARDIAC BLOOD, BLOT/FILTER PAPER, BILE, GASTRIC, SPLEEN, LIVER, PSOAS MUSCLE, LUNG, KIDNEY, URINE, BRAIN

Medical Examiner: VLADIMIR SHVARTS, MD

RESULTS*:

Vitreous: None detected for ethanol, methanol, isopropanol and acetone


Inferior Vena Cava
Blood:

Positive for
Ethyl alcohol 0.09 g%
Carboxyhemoglobin (11% saturation)
None detected for methanol, isopropanol, acetone, amphetamine, methamphetamine, phencyclidine, cocaine, benzoylecgonine, methadone, morphine, codeine, benzodiazepines, barbiturates, antihistamines, phenothiazines, tricyclic antidepressants, fentanyl, oxycodone, and acid neutral drugs

Brain and Lung: Positive by GC/MS for
Benzene
Toluene
Xylene

Urine: None detected for amphetamine, methamphetamine, phencyclidine, cocaine, methadone, codeine, antihistamines, phenothiazines, and tricyclic antidepressants

*If results are not listed for any specimen(s), that/those specimen(s) is/are deemed to be on "HOLD"


Norman A. Wade
Laboratory Director

SA