OFFICE OF THE MEDICAL EXAMINER
DISTRICT NINE
2350 E. Michigan Street
Orlando, Florida 32806-4939

REPORT OF AUTOPSY

DECEDENT: AMANDA ALVEAR **CASE NUMBER:** ME 2016-000934

MANNER OF DEATH: Homicide **IDENTIFIED BY:** Photo ID

AGE: 25 years **SEX:** Female
RACE: White (Hispanic) **DATE OF DEATH:** June 12, 2016

DATE/TIME OF AUTOPSY: June 14, 2016 @ 4:30 p.m.

PERFORMED BY: Russell Vega, MD, Associate Medical Examiner
(District Twelve providing cross coverage)

REVIEWED BY: Joshua D. Stephany, MD, Chief Medical Examiner

CAUSE OF DEATH: Gunshot wounds of head and torso

AUTOPSY FINDINGS

I. Gunshot wound of head
   - A. Perforation of skull with skull fractures
   - B. Tangential perforation of brain
   - C. Penetrating injury of brain from bone fragments
   - D. Thin subdural and subarachnoid hematomas
   - E. Small projectile fragments recovered

continued...

II. Gunshot wound of right lateral chest traversing left arm
   A. Perforations of ribs, spine, right lung and aorta
   B. Exit and then re-entry into left arm
   C. Bilateral hemothoraces

III. Second gunshot wound, right lateral chest
   A. Perforations of ribs, right lung, spine, spinal cord, and left lung
   B. Bilateral hemothoraces
   C. Projectile recovered

IV. Gunshot wound of left forearm
   A. Soft tissue injury only
   B. Projectile recovered

V. Gunshot wound, left great toe
   A. No additional injuries
   B. No projectile recovered

VI. Status post gastric bypass procedure, well-healed

TOXICOLOGY ANALYSIS: See laboratory report.

CONCLUSION: In consideration of the circumstances surrounding the death, and after examination of the body, and review of the available investigative records, it is my opinion that the death of Amanda Alvear, a 25 year old woman, is due to gunshot wounds of the head and torso.

The manner of death is homicide.

POSTMORTEM EXAMINATION
OF THE BODY OF AMANDA ALVEAR

A postmortem examination of the body of a woman identified as Amanda Alvear is performed pursuant to Florida statute 406.11 by Russell Vega, MD, Associate Medical Examiner (District Twelve providing cross coverage) at the Orange County Medical Examiner facility, Orlando, Florida on June 14, 2016, at 4:30 p.m.

IDENTIFICATION: The body of Amanda Alvear is identified by FDLE Special Agent Walsh. The identification is made on June 12, 2016, the Orange County Medical Examiner facility.

CLOTHING AND VALUABLES: Clothing comprises a black floral print sleeveless blouse, an underlying black tank or camisole, a rose-colored bra, and white jeans with, possibly, a subtle pink pattern or floral print that is obscured with blood-staining. Also present are blue boy shorts or underwear. Also on the body are two black hair-bands worn on the wrist, along with a thin yellow metal necklace, a gray metal bracelet about the left wrist, two gray metal rings retrieved from the fingers of the hands, and gray metal stud earrings present in each earlobe, respectively. Separately received with the body is a purse with 5 dollars and 73 cents in American currency and multiple cards, one of which is a Florida driver's license with the name "Amanda Lizette Alvear." Defects in clothing are consistent with wounds described below.

EXTERNAL EXAMINATION

The body is that of a 65 inch in length, 225 pound, normally-developed, white to Hispanic-appearing woman with general appearance consistent with the age of record of 25 years. The body is cool to touch due to refrigeration. Rigor mortis is fully developed but appears to be broken in the upper extremities. Lividity is minimal, involves the posterior aspect of the body, is pink-purple, and is fixed in position.

The scalp hair is black, straight to slightly wavy, 24 inches or greater in maximal length, and fully distributed over the scalp. The irides are brown. The conjunctivae have no petechiae. The teeth are natural and in a good state of repair with normally-aligned and well-maintained braces in place.

The neck has no unusual marks.

The chest is symmetric. The breasts have no masses.

The abdomen is somewhat protuberant with a medium-sized pendulous pannus present. The external genitalia are shaved, normally-developed, and atraumatic.

The extremities are symmetric. The legs have neither pitting edema nor ulcers. The toenails have black nail polish.

The back and anus have no lesions.

Present over the right wrist are two identification bands, one with the number 24 and the number 16-0934, and the other with the name "Amanda, Alvear" and the numbers 24 and 16-934. Also about the right wrist is a thin yellow access-type wristband. About the left wrist are an identification band with the number 24, and a separate band with the number 24, the number 16-934, and the name "Amanda Alvear."

Two short horizontally-oriented scars are over the lateral aspect of the right side of the abdomen. An apparent scar is within the umbilicus. An area of yellow parchment-type change of the skin is over the posterolateral aspect of the right forearm. The body has no tattoos or identifying marks. The body has only those injuries described below.

EVIDENCE OF INJURY

Wound summary:

The body has six (6) separate wound tracks through the body. Two of these, one through the chest and one through the left upper arm, appear to be caused by the same projectile path. In addition, there is a second gunshot wound of the chest. The chest wounds involve both right and left lungs, the aorta, and the spinal cord, with large bilateral hemothoraces. A relatively tangential gunshot wound of the head causes surface and penetrating brain injury. Also present are wounds to the left forearm and left great toe. Recovered are two moderately-deformed jacketed projectiles, one from the forearm, and one from the left flank. Also recovered is a large projectile fragment from the hair and two small fragments form the forehead. None of the wounds have range of fire effect.

The above-summarized injuries are herein described in detail.

Gunshot wound of head:

1) The entrance wound is located over the right temporal scalp, 60 inches superior to the sole of the right foot and 2-3/4 inches to the right side of midline, just anterior and superior to the right ear. The wound is in the hair-bearing aspect of the scalp. It comprises a somewhat irregular, 3/8 inch x ¼ inch perforation. The perforation has its long axis oriented from 2 o'clock to 8 o'clock. The 2 o'clock margin of the wound is somewhat ragged and irregular. The 8 o'clock margin has a more clear arc-shaped edge, and also has a well-defined, 3/16 inch in width, flame-shaped zone of abrasion. The wound has no surrounding stippling and there is no soot fouling associated. Associated with the entrance wound and just anterior and superior to it, is a roughly horizontally-oriented skin split that is not contiguous with the entrance perforation. The skin split is 2-1/2 inches to the right of midline, between the entrance and exit wounds, and is 9/16 inches in length.

2) The exit wound is located over the central aspect of the forehead, 61 inches superior to the sole of the left foot and ½ inch to the left side of midline. It comprises a stellate, somewhat trident-shaped perforation, 1 inch x 5/8 inches in greatest dimension. The wound has no associated stippling, soot fouling, or marginal abrasion.

3) The wound track traverses the skin of the right temporal region, subsequently perforating the underlying temporalis muscle and the right temporal bone to enter the cranial cavity. The wound track then very tangentially traverses the frontal aspect of the cranial cavity on the right side, grazing the right frontal lobe of brain. In addition, the wound track causes comminuted fractures of frontal bones, including some impelling of fracture fragments from near the entrance and/or exit sites. The wound track exits the cranial cavity via comminuted fracture of the frontal bone. The wound track then exits through the previously-described exit wound.

4) Recovered from the area of the exit perforation, in the underlying soft tissues, are two small lead fragments. These are cleaned, photographed, and retained as evidence for law enforcement.

5) Associated with the wound track are thin subdural and subarachnoid hematomas, along with the ragged perforation of the frontal lobe as described. The frontal lobe also has penetrating, laceration-type injuries involving the deeper white matter that are associated with penetrating, impelled bone fragments. No projectile fragments are clearly identified in the deeper tissues. In addition to comminuted fracture about the entrance and exit sites, and linear fractures that connect both the entrance and exit sites through the frontal and temporal bones, there is also a horizontal fracture that extends posteriorly through the temporoparietal bones from the entrance perforation.

6) The wound track is, with reference to the standard anatomic position, from posterior to anterior, from right to left, and from inferior to superior.

Gunshot wound of posterior right lateral chest (more anterior):

1) The entrance wound is located 50 inches superior to the sole of the left foot and ½ inch anterior to the posterior body margin as the body lies on the table. The wound comprises a circular, 3/16 inch in diameter perforation with minimal circumferential abrasion margin and no surrounding stippling or associated soot fouling. There is modest central tissue deficit. Just superior to the perforation, but not contiguous with it, is a 1 ½ inch horizontally oriented oblong purple contusion.

2) The wound traverses the skin and subcutaneous fat of the posterior right lateral chest, along with the deeper musculature. The wound track then perforates the lateral aspect of the 7th rib, and then perforates the right lower lobe of the lung, exiting the pleural cavity by penetrating the 9th thoracic vertebra in its body. The wound track then perforates the spinal cord, and then exits the spine on the left side, then perforating the posterior descending aorta. The wound track then enters the left pleural cavity briefly, perforating the left hemidiaphragm at the medial pleural recess, then perforates the stomach and spleen. The wound track then again perforates the left hemidiaphragm laterally, then perforates the lateral acute margin of the left lower lobe of the lung, then perforates the 8th rib, exits the thoracic wall, and ends in the subcutaneous fat of the left flank.

3) Recovered from the end of the wound track is a mildly-deformed, jacketed medium caliber projectile. This is cleaned, photographed, and retained as evidence for law enforcement.

4) Associated with the wound track are bilateral hemothoraces with 800 ml of largely clotted blood within the right pleural cavity, and 500 ml of largely clotted blood in the left pleural cavity. There is moderate contusional hemorrhage in the lung tissue about all the lung perforations.

5) The wound track is, with reference to the standard anatomic position, from right to left, slightly from superior to inferior, and somewhat from posterior to anterior.

Gunshot wound of posterior right lateral chest (more posterior)

1) The entrance wound is located over posterior right chest laterally, essentially at the lateral margin of the back, 3 ½ inches posteromedial (along the surface of the skin) and 1 inch superior to the entrance wound described immediately above. The wound comprises an irregular perforation, 1/8 x 1/16 in greatest dimensions, without soot fouling, stippling, marginal abrasion, or muzzle stamp.

2) The exit wound is located over the upper left lateral chest wall, 55 ½ inches superior to the sole of the left foot and 5 ½ inches inferior to the point of the shoulder. The wound comprises a ½ inch in length slit-like wound oriented from 11:00 – 5:00. The wound has no soot fouling, stippling, or marginal abrasion.

3) The wound track traverses the skin of the right side of the chest, perforating the right 5th rib posteriorly and entering the right pleural cavity. The wound track then perforates the right lower lobe of lung, then briefly traverses the posteromedial right 5th intercostal space, then perforates the body of the T-5 vertebra. The wound track then perforates the descending thoracic aorta, the left upper lobe of lung, and the left third rib, exiting the pleural cavity. The wound track then traverses soft tissue to exit through the previously described exit wound.

4) No projectile or fragment is recovered from the wound track.

5) Associated with the wound track are bilateral hemothoraces as described in the gunshot wound immediately above.

6. The wound track is with reference to the standard anatomic position, from right to left, from inferior to superior, and somewhat from posterior to anterior.

(Comment: This wound track appears to be collinear and continuous with that described immediately below, thus both wound tracks appears to be caused by the same projectile path.)

Gunshot wound of left arm:

1) The entrance wound is located over the upper medial aspect of the left arm, immediately contiguous with the exit wound of the gunshot wound of chest described immediately above. It is 6 inches inferior to the point of the left shoulder, 13-1/2 inches inferior to the vertex of the scalp, and just anterior to the coronal midline of the left humerus. The wound comprises a 3/8 inch x 1/8 inch irregular perforation with a roughly ¾ inch surrounding zone of pink subtle ecchymosis. The wound has very minimal irregular abrasion margin. It has no soot fouling or stippling associated. It is 7 inches lateral to the midline on the left side.

2) The exit wound is located just somewhat more distal and lateral from the previously-described entrance wound. It is 7-1/2 inches inferior to the point of the shoulder and 15 inches inferior to the vertex of the scalp. It is 8 inches lateral to the midline on the left side, and is somewhat more anterior to the coronal midline of the left humerus. The wound comprises a 7/16 inch in length slit-like perforation without abrasion margin, stippling or soot fouling.

3) The wound track traverses the entrance wound, and passes through subcutaneous fat, to exit through the previously-described exit wound.

4) There are no associated projectiles or fragments recovered.

5) There are no associated injuries.

6) The wound track is, with reference to the standard anatomic position, slightly from medial to lateral, slightly from posterior to anterior, and somewhat from superior to inferior. *(Comment: The directionality, based on standard anatomic position, above, while correct, probably does not reflect the position of the arm and the direction of the wound track at the time the injury was received. The wound track appears to be collinear with the previously-described gunshot wound of the chest, described immediately above. Thus, the two wound tracks appear to be caused by the same single projectile track. Thus, in the position in which the extremity was placed at the time of the injury, the wound track would*

have been from inferior to superior, from posterior to anterior, and from right to left.)

Gunshot wound of left forearm:

1) The entrance wound is located over the mid-anterolateral left forearm, 40-1/2 inches superior to the sole of the foot when in the anatomic position, and 3 inches inferior to the crease of the elbow. Note that the wound is 15-1/2 inches inferior to the point of the shoulder and thus 23 inches inferior to the vertex of the scalp. The wound comprises a dome-shaped perforation, 3/8 inch x ¼ inch in greatest dimension. The wound has subtle adjacent pink ecchymosis, and has no appreciable abrasion collar. There is no associated soot fouling or stippling.

2) While the wound track has no exit, a distinct zone of pink contusion with underlying palpable subcutaneous projectile is evident over the posterior surface of the forearm, 1 inch inferior to the location of the entrance wound, and over the more medial aspect of the forearm.

3) The wound track traverses the skin of the entrance wound, subsequently perforating the lateral extensor musculature of the forearm, without striking the radius or ulna. The wound track then ends in the subcutaneous tissues as described.

4) Recovered from the end of the wound track is a moderately deformed, intact, medium caliber, jacketed projectile. It is cleaned, photographed, and retained as evidence for law enforcement.

5) There are no associated injuries.

6) The wound track is, with reference to the standard anatomic position, from left to right, from superior to inferior, and from anterior to posterior.

Gunshot wound of left great toe:

1) The entrance wound is located over the dorsal aspect of the toe medially, and comprises a ¼ inch x 1/8 inch irregular ragged perforation. It has no clear abrasion margin, and the edges are quite ragged. It has no associated soot fouling or stippling.

2) The exit wound is located over the medial dorsal aspect of the same toe, and comprises an irregular exit perforation that is ½ inch x ¼ inch in its greatest dimension. The long axis of the perforation correlates with the long axis of the toe. The wound has no associated soot fouling or stippling.

3) The wound track traverses the entrance wound, perforates the distal phalanx of the toe, and exits as described.

4) No projectile is recovered from the wound path.

5) The wound track has no associated injuries.

6) The wound track is, with reference to the standard anatomic position, from superior to inferior, slightly from right to left, and without anterior or posterior deviation.

Additional projectiles:

Recovered from and entangled within the scalp hair is a large, prominently deformed projectile fragment; it is unclear if this projectile is associated with any of the wound tracks described above. The fragment is cleaned, photographed, and retained as evidence for law enforcement.

Additional injuries:

1) A 1 ½ inch zone of contusion is over the right lateral aspect of the chest, just superior to the more anterior of the right lateral chest gunshot wounds (described above). It does not appear directly connected to the wound. A small pink contusion is over the mid-ulnar aspect of the left forearm. A medium-sized pink abrasion, or possibly a burn injury, is over the anterior radial aspect of the left wrist. Just proximal to this, but on the more ulnar aspect of the forearm, are a cluster of three small pink abrasions. A ½ inch in greatest dimension curvilinear tan-pink abrasion is over the left cheek near the angle of the jaw. A very subtle linear pink abrasion is over the right cheek near the jaw line.

INTERNAL EXAMINATION

HEAD: The scalp, skull and brain are remarkable for injuries as described. The brain weighs 1380 grams. The external and cut surfaces of the brain have no evidence of natural disease.

NECK: The cervical spine, larynx, hyoid bone and strap muscles of the neck have no injuries (via anterior examination). The upper airways are lined by thin mucosa, without lesions or obstructions. The tongue has no injuries.

BODY CAVITIES: The body cavities are remarkable for injuries as described above. The peritoneal and pericardial cavities have no blood or fluid accumulations. The peritoneal cavity has scattered fibrous adhesions that are relatively minimal amongst loops of small intestine and the transverse colon. The course of the intestines is somewhat irregular due to surgical procedure, as described in Digestive System, below. The body organs are otherwise normally situated, minimally congested, and have no unusual odors.

CARDIOVASCULAR SYSTEM: The great vessels and chambers of the heart are nearly empty, containing scant dark red liquid blood. The great vessels arise normally, follow the usual courses, and have neither thrombi nor emboli. The aorta is remarkable for the two gunshot perforations as described above, without atherosclerosis, aneurysm, or dissection.

The heart weighs 270 grams. The epicardial and pericardial surfaces are smooth and glistening. The coronary arteries arise normally and follow a right dominant distribution; they have no atherosclerosis, thrombosis or other cause of luminal compromise. The myocardial cut surfaces are round, without evidence of recent or remote infarct or other focal changes. The endocardium is thin. The cardiac valves are normally formed, with thin and compliant cusps and leaflets, and have no lesions. The coronary ostia are normally situated and are patent.

LUNGS: The right lung weighs 220 grams; the left lung weighs 220 grams. The lungs are remarkable for perforations as described above. There are no emphysematous changes or tumor nodules. The pulmonary arterial branches have no thromboemboli. The tracheobronchial tree is patent without lesions or obstructions.

LIVER, GALLBLADDER AND PANCREAS: The liver weighs 1350 grams. The capsule is smooth and thin. The cut surfaces are brown, without nodules. There

is no cirrhosis. The gallbladder is absent. The pancreas has tan parenchyma without nodules, hemorrhage, or fibrosis.

HEMIC AND LYPHATIC SYSTEMS: The spleen weighs 180 grams. The capsule is smooth and thin. The cut surfaces are red without nodules. The spleen is remarkable for perforation as described. The lymph nodes appear inconspicuous throughout. The exposed bone marrow is red. The thymus is unremarkable.

DIGESTIVE SYSTEM: The stomach contains scant mucoid tan liquid. The esophagus is unremarkable. The stomach has been previously transected due to gastric bypass procedure. The egress through a limb of small bowel appears narrowed, but unimpeded. The intestine has an apparent Roux-en-Y type resection, with the intestinal limb passing anterior to the transverse colon. All staple lines are intact and there are no obstructions evident. There are no tumors, diverticula or other pathologic findings to in situ examination of the intestinal tract. There are no esophageal or gastric ulcers.

GENITOURINARY SYSTEM: The right kidney weighs 120, as does the left kidney. The capsules strip with ease from the underlying brown cortical surfaces. The cut surfaces have no nodules or cysts and have the usual corticomedullary arrangement. The urinary collecting system is not dilated and no stones are present. The bladder contains a moderate volume of clear pale yellow urine and is lined by smooth mucosa. The vagina, cervix, uterus, fallopian tubes, and ovaries have no pathologic changes, and a normal corpus luteum is present. There is no evidence of intra or extra-uterine pregnancy.

ENDROCRINE SYSTEM: The pituitary gland does not appear enlarged. The thyroid gland has brown parenchyma without cysts or nodules. The adrenal glands have yellow cortices and tan-white medullae without nodules.

MUSCULOSKELETAL SYSTEM: The ribs and spine are remarkable as described above. The clavicles and pelvis have no appreciable fractures. The supporting musculature and soft tissues are remarkable only as described.

RV/alm

Wuesthoff REFERENCE LABORATORY

Wuesthoff Reference Laboratory
6800 Spyglass Court
Melbourne, Florida 32940
Julie Bell, M.D., Laboratory Director

Patient: ALVEAR, AMANDA Age: **25** Sex: **F**
Client Patient ID: 9-16-934 Account#: VX82955
Physician: VEGA, RUSSELL Client: DISTRICT 9 MEDICAL EXAMINER MISC

TOXICOLOGY

Specimen Collected :06/13/2016 Lab Order No: 661401244 Reg Date: 06/14/16

Test Name	Result	Units	Cutoff/Reporting Limits
VOLATILE PANEL - VOLP			
SPECIMEN TYPE			
RIGHT CHEST BLOOD			
ETHANOL	**0.108**	g/dL	0.010
ACETONE	NONE DETECTED	mg/dL	7.5
METHANOL	NONE DETECTED	mg/dL	15.0
ISOPROPANOL	NONE DETECTED	mg/dL	15.0
Analysis by Gas Chromatography (GC) Headspace Injection			
BLOOD DRUG SCREEN - BDSME			
SPECIMEN TYPE			
RIGHT CHEST BLOOD			
GC/MS			
CAFFEINE			
LC/MS/MS			
CAFFEINE			
BLOOD IMMUNOASSAY SCREEN			
BENZODIAZEPINES	NEGATIVE	mg/L	0.050
BUPRENORPHINE	NEGATIVE	mg/L	0.001
CANNABINOIDS	NEGATIVE	mg/L	0.050
COCAINE METABOLITE	NEGATIVE	mg/L	0.100
FENTANYL	NEGATIVE	mg/L	0.001
OPIATES	NEGATIVE	mg/L	0.050
SALICYLATES	**NEGATIVE**	mg/L	50.0

TOXICOLOGY

Specimen Collected :06/13/2016 Lab Order No: 661900677 Reg Date: 06/14/16

Test Name	Result	Units	Cutoff/Reporting Limits

7/25/16

Wuesthoff REFERENCE LABORATORY

Wuesthoff Reference Laboratory
6800 Spyglass Court
Melbourne, Florida 32940
Julie Bell, M.D., Laboratory Director

Patient: ALVEAR, AMANDA Age: **25** Sex: **F**
Client Patient ID: 9-16-934 Account#: VX82955
Physician: VEGA, RUSSELL Client: DISTRICT 9 MEDICAL EXAMINER MISC

TOXICOLOGY

Specimen Collected :06/13/2016 Lab Order No: 661900677 Reg Date: 06/14/16

Test Name	Result	Units	Cutoff/Reporting Limits
VOLATILE PANEL, VITREOUS - VOLPV			
SPECIMEN TYPE			
VITREOUS			
ETHANOL	**0.101**	g/dL	0.010
ACETONE	NONE DETECTED	mg/dL	7.5
METHANOL	NONE DETECTED	mg/dL	15.0
ISOPROPANOL	NONE DETECTED	mg/dL	15.0

Analysis by Gas Chromatography (GC) Headspace Injection

7/28/16

Specimens were intact upon receipt. Chain of custody, specimen security and integrity has been mantained. Testing has been performed as requested

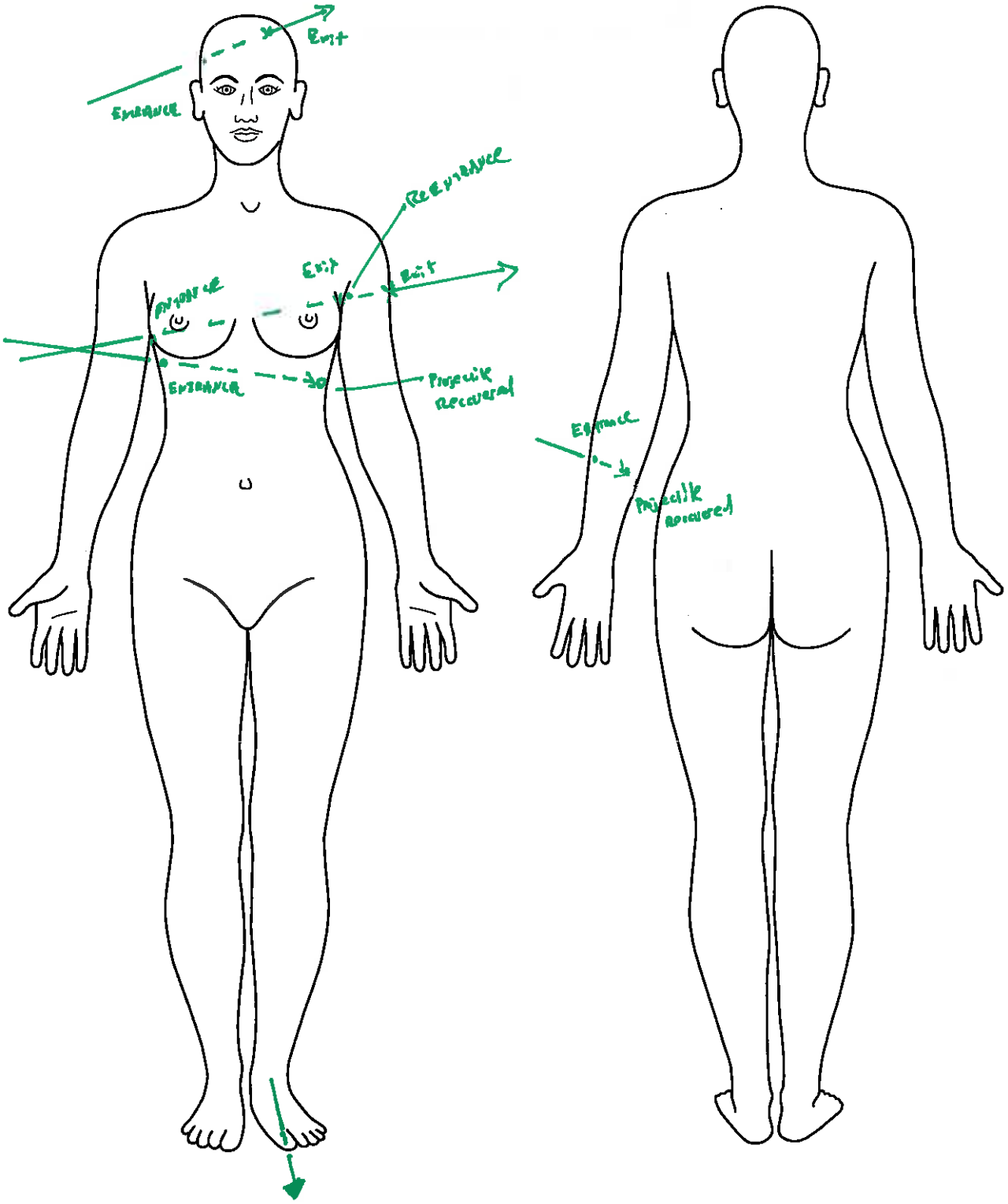
Reviewed by: _____ Date: 7/21/16

FINAL REPORT - THIS COMPLETES REPORTING ON THIS CASE

ME16-00934

Alvear, Amanda

25 Years 6/12/2016



CLARIFICATION DIAGRAM