Incisions made in the direction of Langer’s lines are less likely to gape. This is because they run parallel to the predominant direction of collagen bundles in the dermis - Langer developed his lines by stabbing cadavers with a conical punch. The resulting defects were often oval, rather than circular, because of the direction of the underlying collagen bundles. Langer joined the long axis of these ovals to establish his lines.

The direction of Langer’s line on the torso can be established by placing the patient in the foetal position. Then outline the perimeter of a 20 cent piece over the area of interest. When the patient stand upright the outline of the coin will be oval with the long axis indicating Langer’s line.

It is useful to know the surface marking of the entrance of the superior vena cava into the right atrium when positioning a central venous catheter. It is represented by a transverse line 2.5 cm long that is centered on the right side over the second costochondral junction.

The aorta bifurcates at the level of the umbilicus. Hence, there is no point in palpating for an abdominal aortic aneurysm or peri-aortic nodes below the level of the umbilicus.

The internal opening of the parotid ducts is opposite the second upper molar teeth.

The isthus of the thyroid gland lies over the 2\textsuperscript{nd} and 3\textsuperscript{rd} tracheal rings, so it usually needs to be either displaced or divided when performing a tracheostomy.

The spleen is more posterior than most students appreciate. It lies next to the tail of the pancreas in front of the left kidney. It is in line with the 9\textsuperscript{th}, 10\textsuperscript{th} and 11\textsuperscript{th} ribs and extends from the lateral border of the paravertebral muscles to the posterior axillary line.

Haemorrhoids are enlarged haemorrhoidal cushions, which contain erectile tissue. There are usually three haemorrhoidal cushions at the 3, 7 & 11 o’clock positions. This corresponds to the position of the left superior rectal artery and the two branches of the right superior rectal artery. Erectile tissue contains arterio-venous shunts and this is why the blood loss from haemmarroids is bright red.

McBurney’s point indicates the surface marking of the base of the appendix. It lies one-third of the way along a line connecting the anterior superior iliac crest with the umbilicus.

The first rib slopes down so that the apex of the lung lies above the thoracic inlet. This means that the lung can be damaged when inserting a central venous line into the supraclavicular fossa.

The diaphragm is supplied by the phrenic nerve (C5,6). Damage to the phrenic nerve results in paralysis of the diaphragm i.e., the hemidiaphragm is raised and there is paradoxical respiration.
To count the ribs slide your finger laterally from the sternal angle onto the second costal cartilage – the second intercostal space is inferior to the second rib.

The bare area of the pericardium, which is sometimes used for pericariocentesis, is beneath the 5<sup>th</sup> and 6<sup>th</sup> intercostal spaces near the sternum.

Divarification of the recti muscles is a normal variant. The defect disappears on standing, unlike an incisional hernia.

Lymphatics from the testes drain to the peri-aortic nodes. In general, lymphatics accompany arteries; so, if you know the blood supply to an organ you also know its lymphatic drainage. Scrotal tissue external to the testes and the spermatic cord drains to the inguinal lymph nodes.

Hydroceles occur within the processus vaginalis so that the testis lies posterior: epididymal cysts lie above and behind the testis, which then lies anterior.

Grossly enlarged bladders insert themselves between the parietal peritoneum and the anterior abdominal wall. This provides an extraperitoneal route for suprapubic drainage of the bladder.

The surface marking of the internal inguinal ring is just above the midpoint of the inguinal ligament (between the anterior superior iliac spine and the pubic tubercle).

The femoral artery lies below the mid-inguinal point (half way between the anterior superior iliac spine and the pubic symphysis).

The femoral vein lies medial to the femoral artery.

Femoral hernias emerge from the femoral canal, which is inferolateral to the pubic tubercle.

Buttock injections can damage the sciatic nerve. To define the safe area place your index finger on the anterior superior iliac spine and spread your 3<sup>rd</sup> finger posteriorly along the iliac crest. The safe area then lies between your index and 3<sup>rd</sup> fingers.

The dorsalis pedis artery ends by passing through the first interosseous space to supply the planter region of the foot.