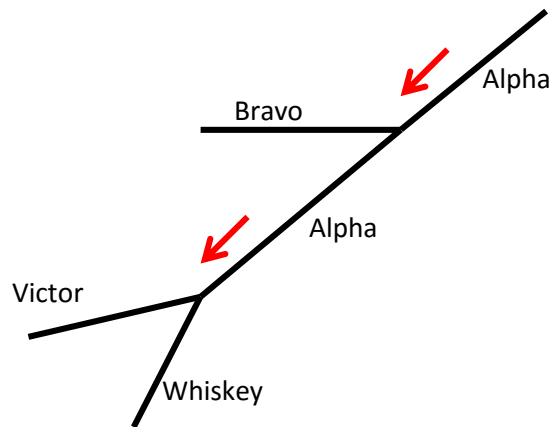


What “Gives”?

This worksheet will help you understand how arteries give rise to new arteries and veins give rise to new veins. There are some important things to remember while going through this worksheet. Refer back to these things often, especially if you “get stuck”.

- Arteries carry blood away from the heart out to a capillary bed and branch to give rise to (to make) new arteries on the way.
 - One artery may not branch to give rise to two new arteries. Artery “Alpha” may give rise to a branch named artery “Bravo”, but below that branch continue as artery “Alpha”.
 - This is just something you have to memorize (use your road maps)

Examples:



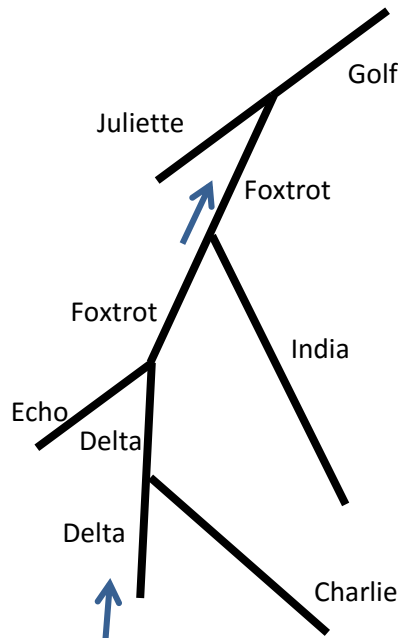
In the diagram above:

- The red arrow indicates the direction of blood flow.
- Artery Alpha gives rise to artery Bravo and continues on as artery Alpha after Bravo.
- Artery Alpha gives rise to Arteries Victor and Whiskey more distally.
- You could also say that arteries Victor and Whisky are formed from the branching of artery Alpha.

Veins carry blood towards the heart from a capillary bed and merge to give rise to new veins on the way.

- Two separate veins may not merge to give rise to a new vein. Vein “Charlie” may merge with vein “Delta” and above the merge the vein may still be “Delta”.
 - This is just something you have to memorize (use your road maps)

Examples:



In the diagram above:

- The blue arrow indicates the direction of blood flow.
- Vein Charlie merges with vein Delta.
- Vein Delta and vein Echo merge to give rise to vein Foxtrot.
- Vein India merges with vein Foxtrot.
- Vein Foxtrot and vein Juliette merge to give rise to vein Golf.
- You could also say that vein Foxtrot is formed from the merging of veins Echo and Delta and that vein Golf is formed from the merging of veins Foxtrot and Juliette.

Now let's practice on the actual vessels we are learning. You will need the labeled practice sheets from the website. Refer to the labeled practice sheets and answer the following questions. The answers are given at the end of the worksheet.

Upper Limb and Thorax Arteries:

- The aortic arch gives rise to which three branches?
- The Brachiocephalic trunk gives rise to which two vessels?
- The axillary artery gives rise to which vessels?
- The subscapular artery forms as a branch from which artery?
- The brachial artery gives rise to which two arteries?

Abdominopelvic Arteries:

- Name the major branches of the aorta:
- The celiac trunk gives rise to which arteries?
- The superior mesenteric artery gives rise to which arteries?
- Inferiorly, the aorta gives rise to which vessels?

Lower Limb Arteries:

- The Common iliac artery (right or left) gives rise to which arteries?
- Which artery gives rise to the femoral artery?
- The femoral artery becomes which artery behind the knee?
- The popliteal artery gives rise to which two arteries?
- A branch of the posterior tibial artery is which artery?
- Which artery gives rise to the dorsalis pedis arteries?

Upper limb and Thorax Veins:

- Which two vessels merge to give rise to the brachial vein?
- Which vessel connects the cephalic vein to the basilic vein?
- The cephalic vein and the axillary vein merge to give rise to which vein?
- The axillary vein is formed from the merging of which two veins?
- Which two veins merge to give rise to the superior vena cava?

Abdominopelvic veins:

- Which three veins give rise to the inferior vena cava?
- List the veins that merge with the inferior vena cava:
- The left gonadal vein merges with which vein?
- The inferior mesenteric vein merges with which vein?

- Which veins merge with the superior mesenteric vein?
- Which vein enters the liver?
- Which veins drain the liver and merge with the inferior vena cava?

Lower Limb Veins:

- The fibular vein merges with which vein?
- The dorsalis pedis veins drain into which vein?
- The anterior and posterior tibial veins merge to give rise to which vein?
- Which vein merges with the popliteal vein?
- The popliteal vein becomes which vein above the knee?
- Which veins merge with the femoral vein?
- The femoral vein becomes which vein within the pelvis?
- Which vessels merge to form the common iliac vein?

Answers

Upper Limb and Thorax Arteries:

- The aortic arch gives rise to which three branches? **Brachiocephalic trunk, left common carotid and left subclavian arteries**
- The Brachiocephalic trunk gives rise to which two vessels? **Right subclavian and right common carotid arteries**
- The axillary artery gives rise to which vessels? **Subscapular and Brachial arteries**
- The subscapular artery forms as a branch from which artery? **Axillary**
- The brachial artery gives rise to which two arteries? **Radial and Ulnar arteries**

Abdominopelvic Arteries:

- Name the major branches of the aorta: **Celiac trunk, superior mesenteric, suprarenal, renal, gonadal (ovarian and testicular), lumbar, inferior mesenteric and iliolumbar**
- The celiac trunk gives rise to which arteries? **Common hepatic, left gastric and splenic**
- The superior mesenteric artery gives rise to which arteries? **Intestinal, ileocolic and pancreaticoduodenal**
- Inferiorly, the aorta gives rise to which vessels? **Right and left common iliac and the median sacral arteries**

Lower Limb:

- The Common iliac artery (right or left) gives rise to which arteries? **Internal and external iliac arteries**
- Which artery gives rise to the femoral artery? **External iliac artery**
- The femoral artery becomes which artery behind the knee? **Popliteal artery**
- The popliteal artery gives rise to which two arteries? **Anterior and Posterior tibial arteries**
- A branch of the posterior tibial artery is which artery? **Fibular artery**
- Which artery gives rise to the dorsalis pedis arteries? **Anterior tibial artery**

Upper limb and Thorax Veins:

- Which two vessels merge to give rise to the brachial vein? **Radial and ulnar veins**
- Which vessel connects the cephalic vein to the basilic vein? **Median cubital vein**
- The cephalic vein and the axillary vein merge to give rise to which vein? **Subclavian vein**
- The axillary vein is formed from the merging of which two veins? **Basilic and brachial**
- Which two veins merge to give rise to the superior vena cava? **Right and left brachiocephalic veins**

Abdominopelvic veins:

- Which three veins give rise to the inferior vena cava? **Right and left common iliac and the median sacral vein**
- List the veins that merge with the inferior vena cava: **Iliolumbar, lumbar, right gonadal, renal, suprarenal, right and left hepatic veins**
- The left gonadal vein merges with which vein? **The left renal vein**
- The inferior mesenteric vein merges with which vein? **Splenic vein**
- Which veins merge with the superior mesenteric vein? **Intestinal veins, ileocolic vein, pancreaticoduodenal veins, splenic vein**
- Which vein enters the liver? **Hepatic portal vein**
- Which veins drain the liver and merge with the inferior vena cava? **Right and left hepatic veins**

Lower Limb Veins:

- The fibular vein merges with which vein? **Posterior tibial**
- The dorsalis pedis veins drain into which vein? **Anterior tibial**
- The anterior and posterior tibial veins merge to give rise to which vein? **Popliteal vein**
- Which vein merges with the popliteal vein? **Small saphenous vein**
- The popliteal vein becomes which vein above the knee? **Femoral vein**

- Which veins merge with the femoral vein? **Great saphenous and the lateral circumflex veins**
- The femoral vein becomes which vein within the pelvis? **External iliac**
- Which vessels merge to form the common iliac vein? **External and internal iliac veins**