Commences medially on the dorsum of the hand and runs up the medial aspect of the forearm becoming anteromedial at the elbow. It continues proximally medial to biceps passing deep to the deep fascia at the middle of the humerus. It becomes the axillary vein at the lower border of teres major.

The medial brachial vein often joins the basilic vein before this becomes the axillary vein.

The median cubital vein drains laterally into the cephalic and medially into the basilic at the elbow.