The superior cervical ganglion is the largest of the cervical ganglia and consists of the fused ganglia of C1 to C4. It is situated at the level of the second and third cervical vertebrae, anterior to the longus capitis muscle and posterior to the internal carotid artery and its carotid sheath. It is connected to the middle cervical ganglion inferiorly by the sympathetic trunk. It gives rise to lateral, medial and anterior branches.

The anterior branches of the superior cervical ganglion form fragile networks, in which ganglia may be found, around the common carotid, external carotid and facial arteries.