Tibial nerve The tibial branch of the sciatic nerve contains anterior nerve fibers from the lumbosacral trunk and S1 – S3. In the popliteal fossa, it gives off genicular branches to the knee joint (that accompany the genicular arteries) and muscular branches to soleus, plantaris, popliteus, and gastrocnemius. As the tibial nerve exits the popliteal fossa, it crosses medially over the tibial vein (continuation of popliteal vein) to rest between the vein and its artery on the superficial surface of popliteus. In the calf, it provides muscular innervation for flexor digitorum and hallucis longus, tibialis posterior and soleus. The former branch innervates the medial sole and the medial plantar aspect of 3 1/2 toes, along with abductor hallucis, flexor digitorum brevis, the first lumbrical, flexor hallucis brevis.