**Purpose**

To establish a procedure on how to gross amputations for gangrene and/or vascular insufficiency.

**Procedure**

Through an incision in the posterior midline of the thigh, of the popliteal area and of the calf, with the incision angling to the posterior border of the medial malleolus, the femoral, popliteal, peroneal, and posterior tibial vessels and accompanying nerves are exposed (see figure).

Through an incision from a point between the fibular head and the tibial tuberosity to the mid-dorsum of the ankle the anterior tibial neurovascular bundle is exposed.

The vessels are assessed by serial cross-sectioning at intervals of 4 to 5 mm.

In some instances, it will be necessary to fix the neurovascular bundle en bloc (or even to decalcify it) prior to sectioning.

Dorsalis pedis and plantar vessels are examined and sampled by removing rectangular tissue blocks from the respective surfaces of the foot, down to the plane of the bones.  Sectioning of vessels may be facilitated by prior en bloc fixation.

Joints should be opened and inspected.  Bone should be examined if involved (i.e., deep ulcers, etc.).

**Description:**

Type of amputation; right or left.

Length.

Appearance of skin; gangrene, ulcers, dermatitis (positions and size of abnormal area(s).

Appearance of soft tissues.

Appearance of bones and joints.

Appearance of vessels; atherosclerosis (with location and degree of stenosis, thromboemboli, etc.).

**Sections for Microscopic Examination:**

Skin at the margin of resection to check for viability.

Muscle at the margin of resection to check for viability.

Grossly abnormal areas of soft tissue and skin.

Bones and joints (as indicated by gross findings; sections of normal bones are not necessary).

Major vessels and nerves (to represent most significant lesions and/or representative state).  Depending upon the case, this may result in the submission of between a half dozen and a dozen tissue blocks for microscopic study.

