PROJECT RESUME

Micro-computed tomography (microCT) of bone is a key research technique that allows virtual bone biopsy to be performed on *ex vivo* tissue specimens. In this collaborative, cross-disciplinary project we use human cadaveric specimens to establish the feasibility of microCT scanning and reliability of subsequent virtual bone biopsy of entheseal and non-entheseal bone around the proximal tibia in order to investigate why the anterolateral capsular structures of the knee joint avulse in traumatic ACL injury. This poorly understood clinical phenomenon is an important marker of traumatic internal knee derangement, but the mechanisms that underlie it are poorly understood. Using virtual bone biopsy to compare morphometric bone parameters such as cortical thickness, bone volume over tissue volume (BVTV) and bone mineral content will allow us to develop a better understanding of the role of these entheses in the stability of the knee joint and why the clinically important Segond fracture occurs.

*File: USSVRS-ProjectResume-201718-BRASSETT*