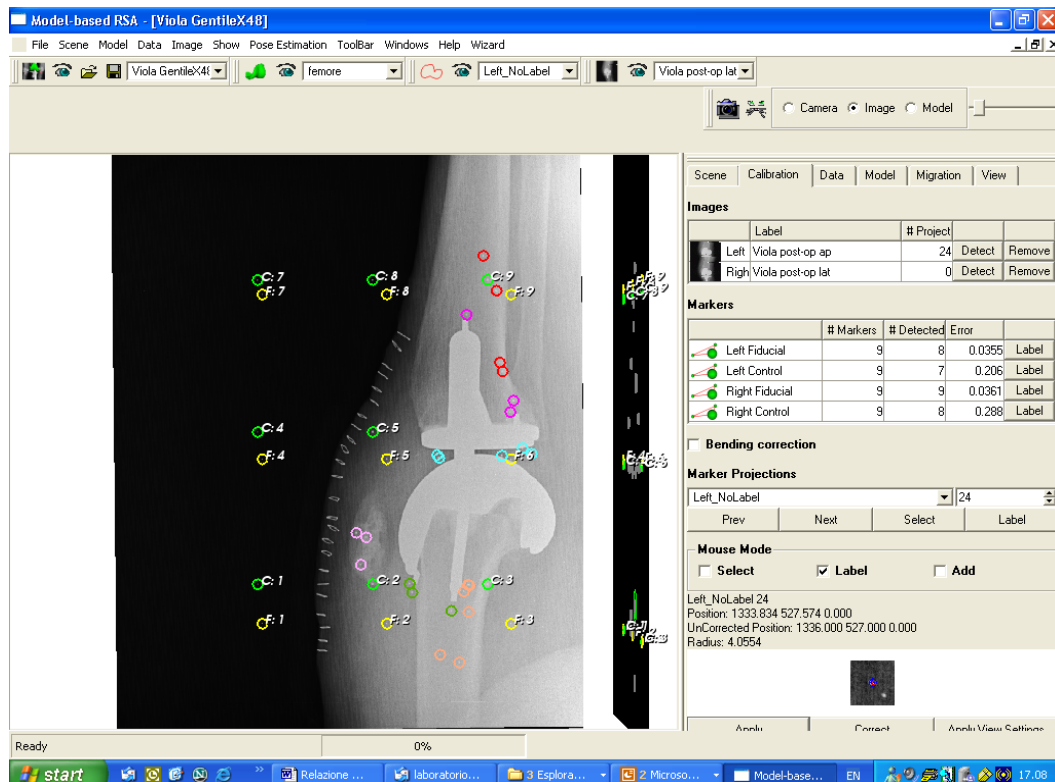


Kinematic analysis of long-term follow-up for total knee replacement

Rationale

The evaluation of the stability of total knee prosthesis is an important factor to predict early risks of failure and loosening and therefore find prevention methods to avoid or post-pone revisions which are painful and traumatic for patients. The standard technique for these kind of measurements, requiring very high accuracy, is RSA (roentgen stereophotogrammetric analysis), that is double Xrays performed within a calibrated tool which can be elaborated by a dedicated software to obtain the 3D position radio-opaque markers implanted in the bone.



Goal of the study

The goal of this study is to perform an RSA analysis of the performances of DePuy Rotating Platform cruciate sacrificing total knee prosthesis on a set of patient already examined during 5 years follow-up. The study consists in the statistical analysis of migrations and correlation with the prosthesis design and the anatomical features of the patients.

Requirements

A basic background on rigid body mathematics, statistics and interest in software elaborations are required to perform the study.

The results can be used for a scientific publication. This study could be continued as a multicentric study between Rizzoli Hospital and the University hospital in Leiden.