

## Protocol X-ray imaging lower extremities for osseointegration

**Goal:** X-ray imaging protocol standing upright (in all cases), femur (in case of trans-femoral and through-knee amputation) and/or knee (in case of trans-tibial amputation) for osseointegration

**Indication:** Osseointegration pre-operative templating or post-operative follow-up

- Standing upright photo, anterior-posterior: to determine position of legs pre-operative
- Femur and/or knee photo, anterior-posterior and lateral: to determine the size of the implant as well as evaluation of bone quality

### Materials used

- Calibration marker with known size (preferably 28mm, 32mm or 1inch=25,4mm)
- Radio-opaque ruler: please indicate whether metric or imperial is used
- Cushions

### Protocol

- Standing upright photo, anterior-posterior:
  - When patient is able to stand upright with prosthesis, this would be highly preferable
  - When patient has no prosthesis or is unable to stand upright with their prosthesis, prosthesis can be taken off
  - In case of bilateral amputation: only to be made when patient is able to wear both prosthesis
- Femur, anterior-posterior and lateral:
  - The stump is positioned flat on the surface, to avoid discrepancies in the calculations
  - The whole stump has to be included in the x-ray of the femur, both anterior-posterior and lateral. The distal part of the stump should be considered as starting point of your x-ray
  - In case of a long stump and the greater trochanter or femoral head not being shown on the initial images, make additional x-rays. The hip joint is part of the pre-operative evaluation of the patient.
  - Position the calibration marker between the legs of the patient (greater trochanter level)
  - Position the radio-opaque ruler lateral of the femur on femoral bone level (use material when needed to place ruler at correct level, e.g. small cushions). Both have to be within the x-ray scope
  - Marker and ruler are not used for the lateral x-ray
- The stump is positioned flat on the surface, to avoid discrepancies in the calculations
  - The whole stump has to be included in the x-ray of the knee, both anterior-posterior and lateral. Position the calibration marker between the legs, just above the knee joint
  - Position the radio-opaque ruler lateral of the knee joint (use material when needed to place ruler at correct level, e.g. small cushions). Both have to be within the x-ray scope
  - Marker and ruler are not used for the lateral x-ray

In case of questions and remarks, feel free to email us at: [mail@aofeclinics.nl](mailto:mail@aofeclinics.nl)