

## Summary of research proposal LROI



### Title:

Cemented or cementless revision stems for periprosthetic femoral fractures in total hip arthroplasty? And should we revise the cup too? An exploratory study based on Dutch Arthroplasty Register data

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### Abstract:

As the prevalence of total hip arthroplasty (THA) rises, the incidence of complications is set to increase as well. One of these complications is a periprosthetic fracture (PPF), mostly of the femur. Currently, revision surgery for periprosthetic fractures accounts for 14% of all registered THA revisions in the Netherlands. Different reconstruction options are available for patients with PPF depending on various factors such as the fracture pattern, bone defect size, patient characteristics as well as skills and preference of the surgeon. PPFs may necessitate either fracture fixation alone leaving the original implant in situ or including revision of the implant. There is no consensus on the best fixation method for patients with a PPF in which revision of the femoral stem is indicated. In addition, it is unknown whether an additional cup replacement is beneficial. In this study, we aim to: 1) Compare the risk of re-revision for any reason between cemented and uncemented stems after revision of a PPF. 2) Investigate possible differences in modes of failure between cemented and uncemented revision stems after revision of a PPF. 3) Compare the risk of re-revision for any reason of a stem revision only versus a total revision (additional cup replacement) following revision of a PPF.

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