

Peri-prosthetic fractures – Should I operate?

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Declarations

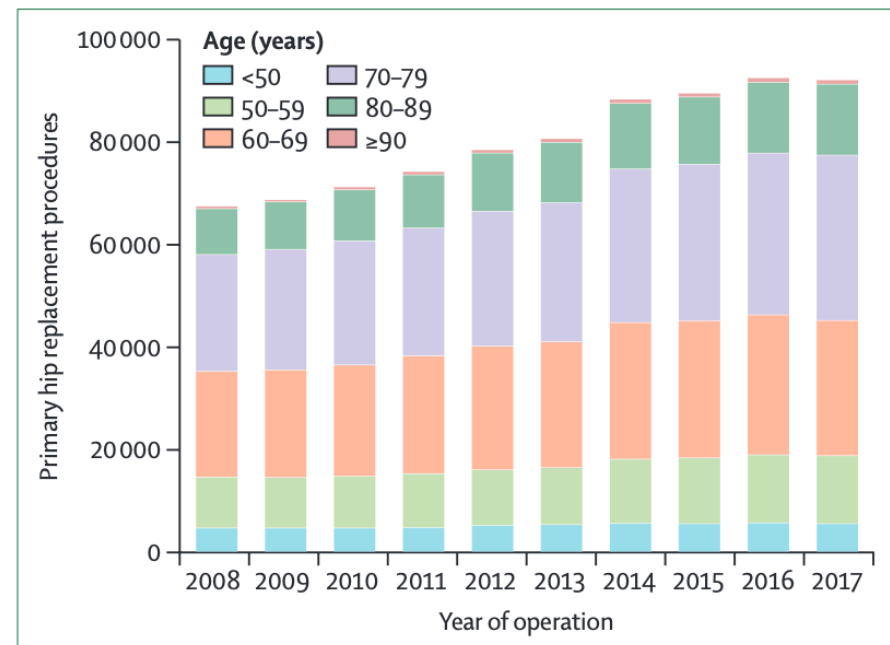
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Should I Operate?

- Size of the problem
- Options
- Effect of Surgery
- **When** should I operate?
 - What time?
 - Which cases?
- Cost

Epidemiology – The Denominator

- Hip replacement is an increasingly common operation¹
- Knee replacement is also becoming more common with over 100,000 primary procedures per annum², average age 68.9 yrs



Graph taken from taken from Ferguson *et al*¹

Epidemiology – The Numerator

- The NJR has identified an increasing rate of revision for peri-prosthetic fractures around THRs
- 0.15 revisions per 1,000 person years for TKRs
- 0.67 revisions per 1,000 person years for THRs
- Actual 10 yr cumulative incidence probably around 2-4% for THR
- Actual 10 yr cumulative incidence probably around 2% for TKR
- Non-operative treatment and fixation data not collected by registries

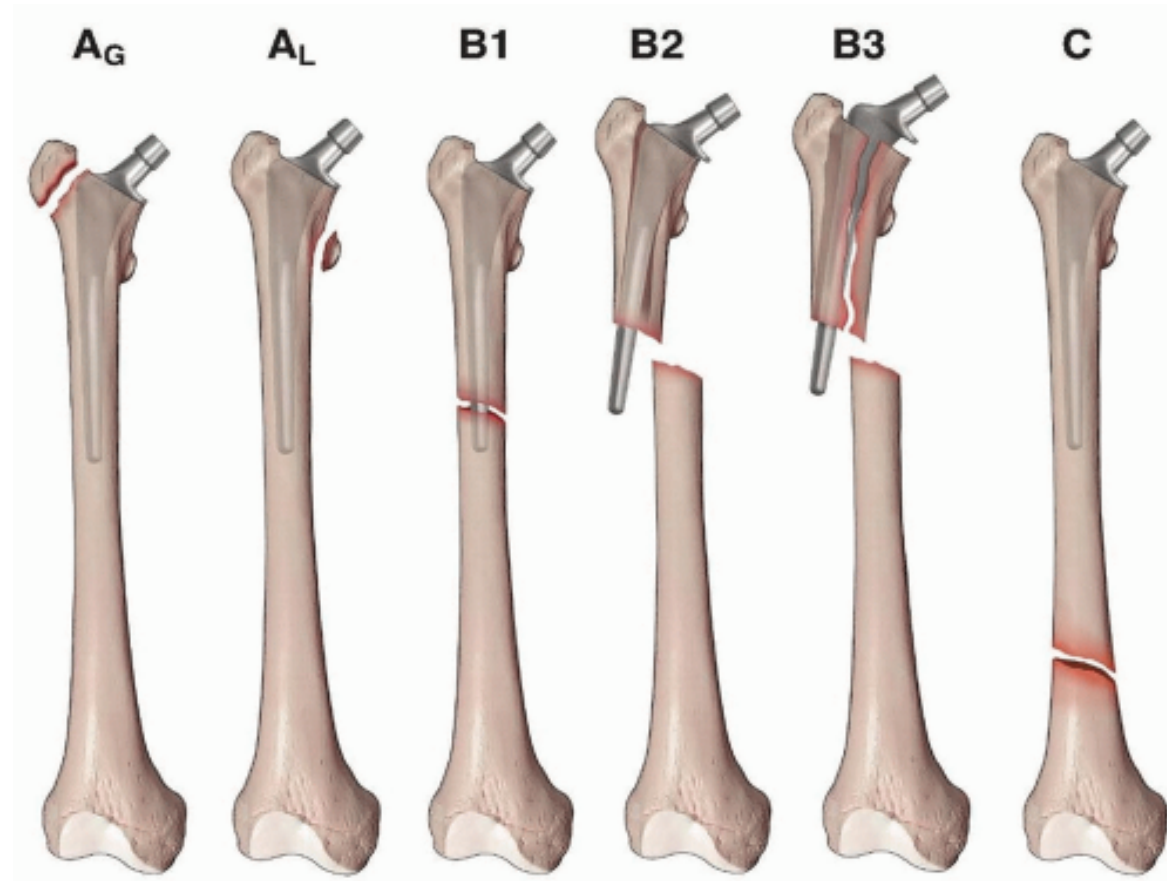
Peri-prosthetic Fractures

- Any fracture around, or close to, an existing prosthesis.



Now, what you've all been
waiting for:

Types of Periprosthetic Fracture



Surgical Options

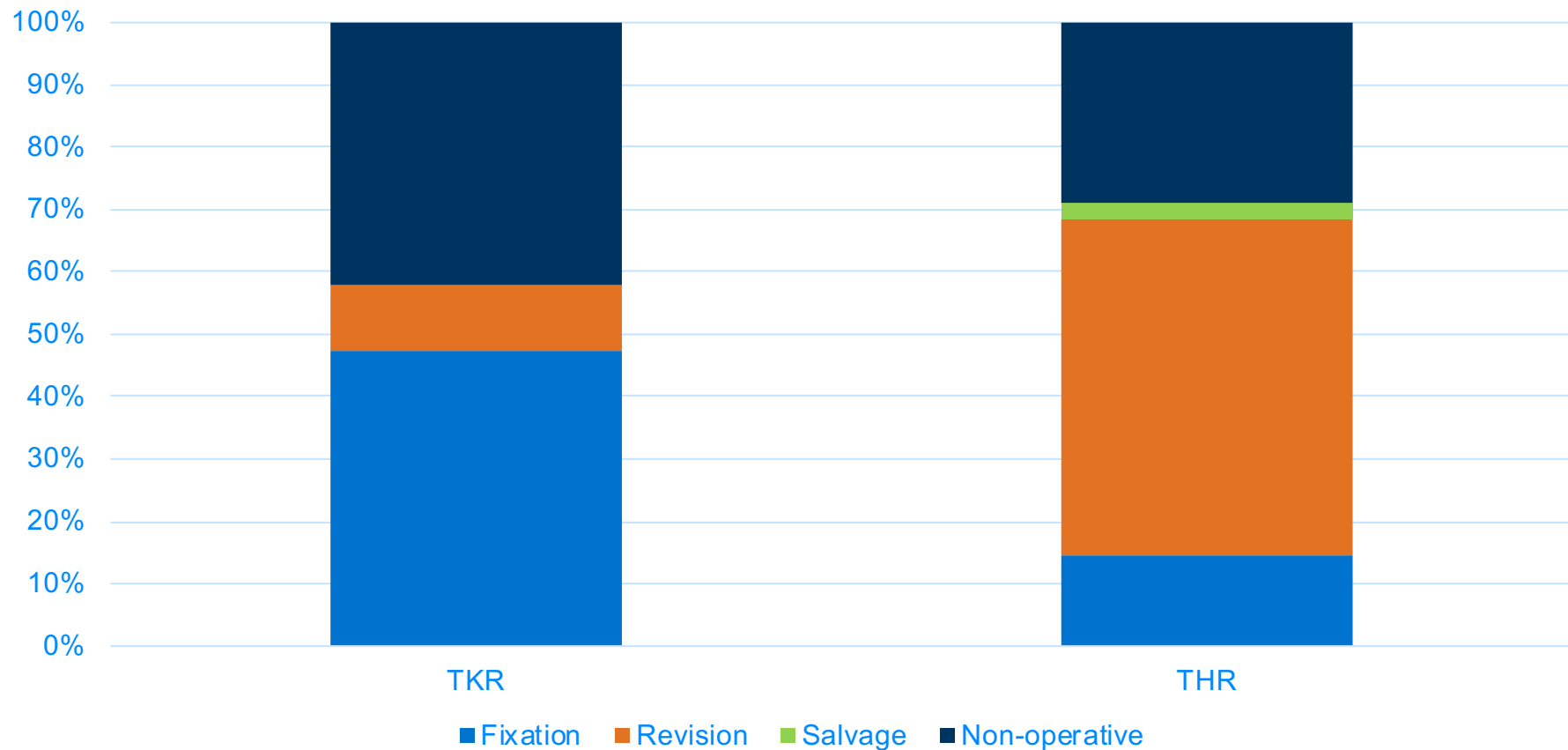
- A Non-operative
- B1 Fix
- B2 Revise
- B3 Revise with allograft or proximal femoral replacement
- C Fix

Hip Fractures v Periprosthetic Fractures

	Hip Fracture	Periprosthetic Fracture
Average Age	83 yrs	79 yrs
Mortality (30-day)	6.9%	3.3%
Non-operative treatment	2.2%	25%
LOS	19.7 days	17 days

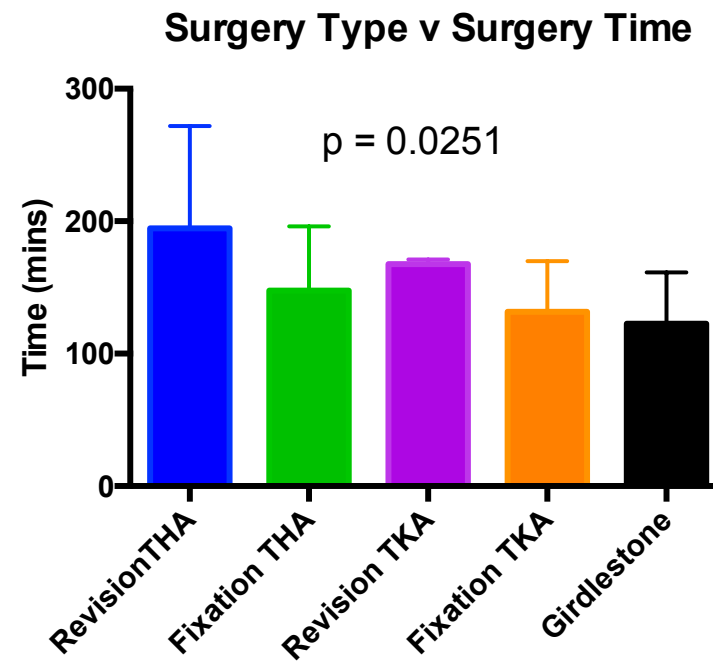
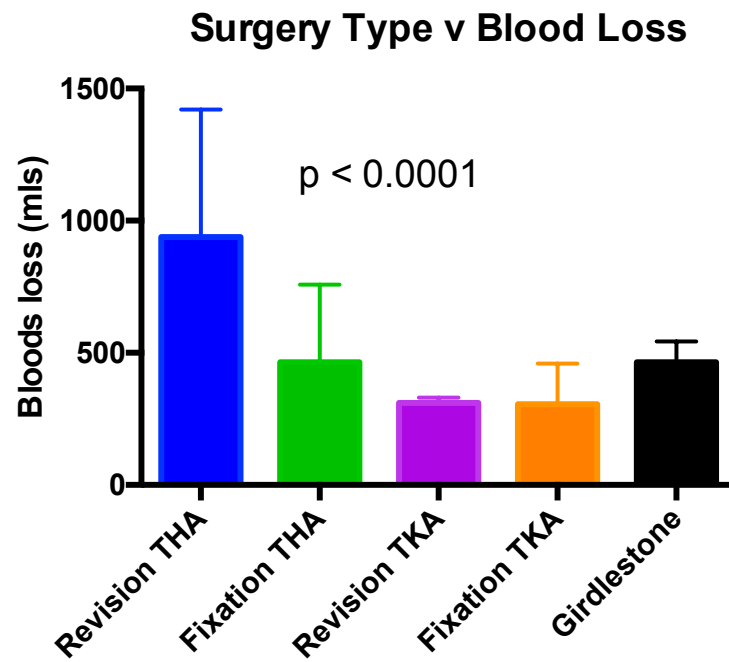
Hip fracture data from 2018 NHFD Report³

Treatment Options

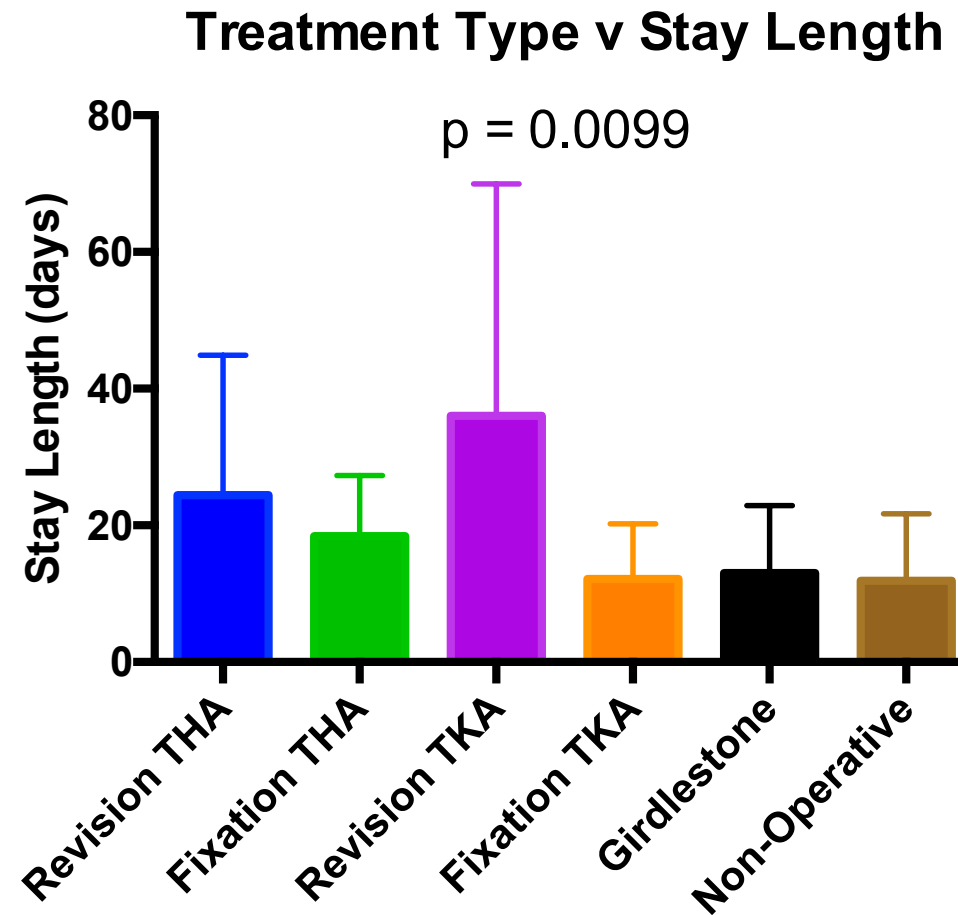


Data from Peterborough City Hospital

Effects of Different Types of Treatment



Long Hospital Stays



Does delay matter?

- Apparently not⁴
- Complex surgery
- Often requires sub-specialist surgeon



Complications - Other

Unlike Native Hip Fractures, Delay to Periprosthetic Hip Fracture Stabilization Does Not Significantly Affect Most Short-Term Perioperative Outcomes



Patawut Bovonratwet, BS ^a, Michael C. Fu, MD, MHS ^b, Murillo Adrados, MD ^a,
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So, should I operate?



So, should I operate?

- No obvious difference in mortality between groups
- Some patients may benefit from having the “wrong” operation⁵ (see next slide)



Periprosthetic femoral fractures after total hip arthroplasty:
An algorithm of treatment

Vito Pavone*, Claudia de Cristo, Antonio Di Stefano, Luciano Costarella, Gianluca Testa,
Giuseppe Sessa

- This carries a risk of further surgery⁶



■ HIP

A systematic review of Vancouver B2 and B3
periprosthetic femoral fractures

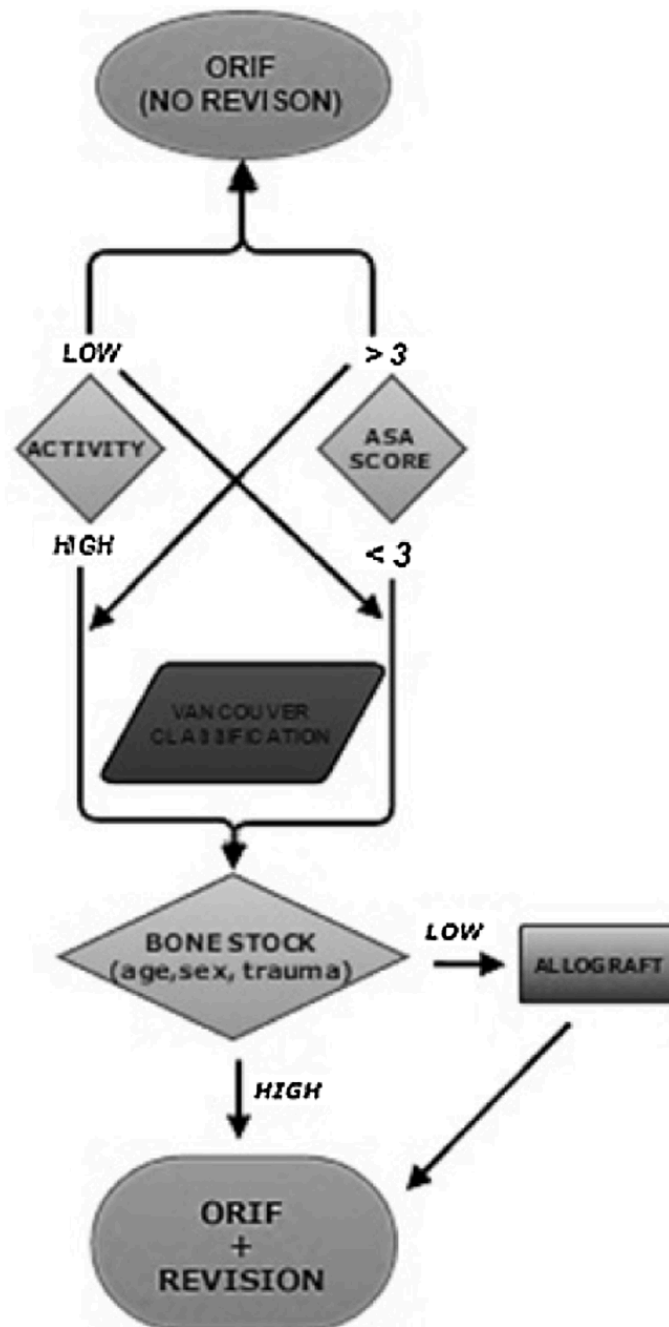
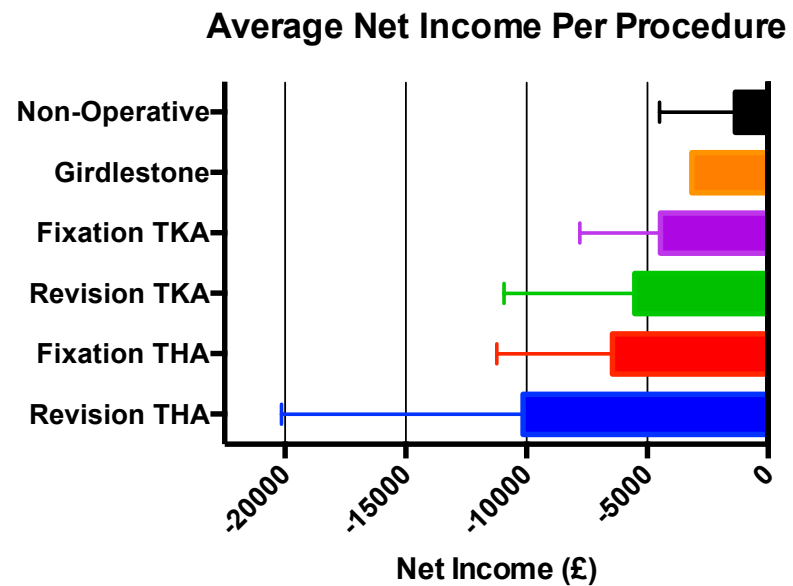


Fig. 1. Management of periprosthetic femoral fracture.

Cost

- Extremely costly procedures
- Not properly reimbursed



Future Directions

- Determination of who should get what type of operation
- Development of regional centres of excellence and referral pathways
- Orthogeriatric input as standard
 - Provision/funding
- Monitoring of outcomes - ?expansion of the NJR
 - To ensure ORIF and conservative treatment cases captured
- Adequate reimbursement by commissioners to ensure service development can take place

Questions?

References

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