

# Trochanteric Femur Fractures: Timely Surgery Matters

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Fig. 1: Trochanteric femur fracture

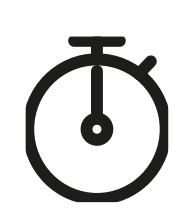
## CONCLUSION

- **Minimizing surgical delay in trochanteric fractures is crucial – delay increases risks (complications, mortality) & costs without benefit.**
- **Night-time surgery should not be avoided.**
- **Short delays for medical optimization only may be justified.**
- **Orthogeriatric co-management + organizational improvements are essential for timely, safe care.**
- **With fragility fractures rising, focused research & early multidisciplinary care remain key to better outcomes & efficiency.**

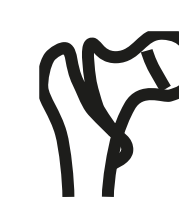
## CLINICAL PROBLEM



Aging population: ↑ hip fractures



Guidelines:  
< 24h surgery improves survival



Trochanteric fractures are underrepresented in research



Nighttime surgery raises safety concerns

## OBJECTIVE

Does surgical delay or time of day affect in-hospital outcome (complications, mortality) in patients with trochanteric femur fractures treated with CRIF?

## METHODS

- Swiss nationwide registry AQC
- 7,184 patients with trochanteric femur fractures treated with CRIF (2001-2024)
- In-hospital complication and mortality
- Compared: <24h vs. >24h | Day vs. Night
- Independent predictors: backwards stepwise binary logistic regression

## RESULTS

### DEMOGRAPHICS

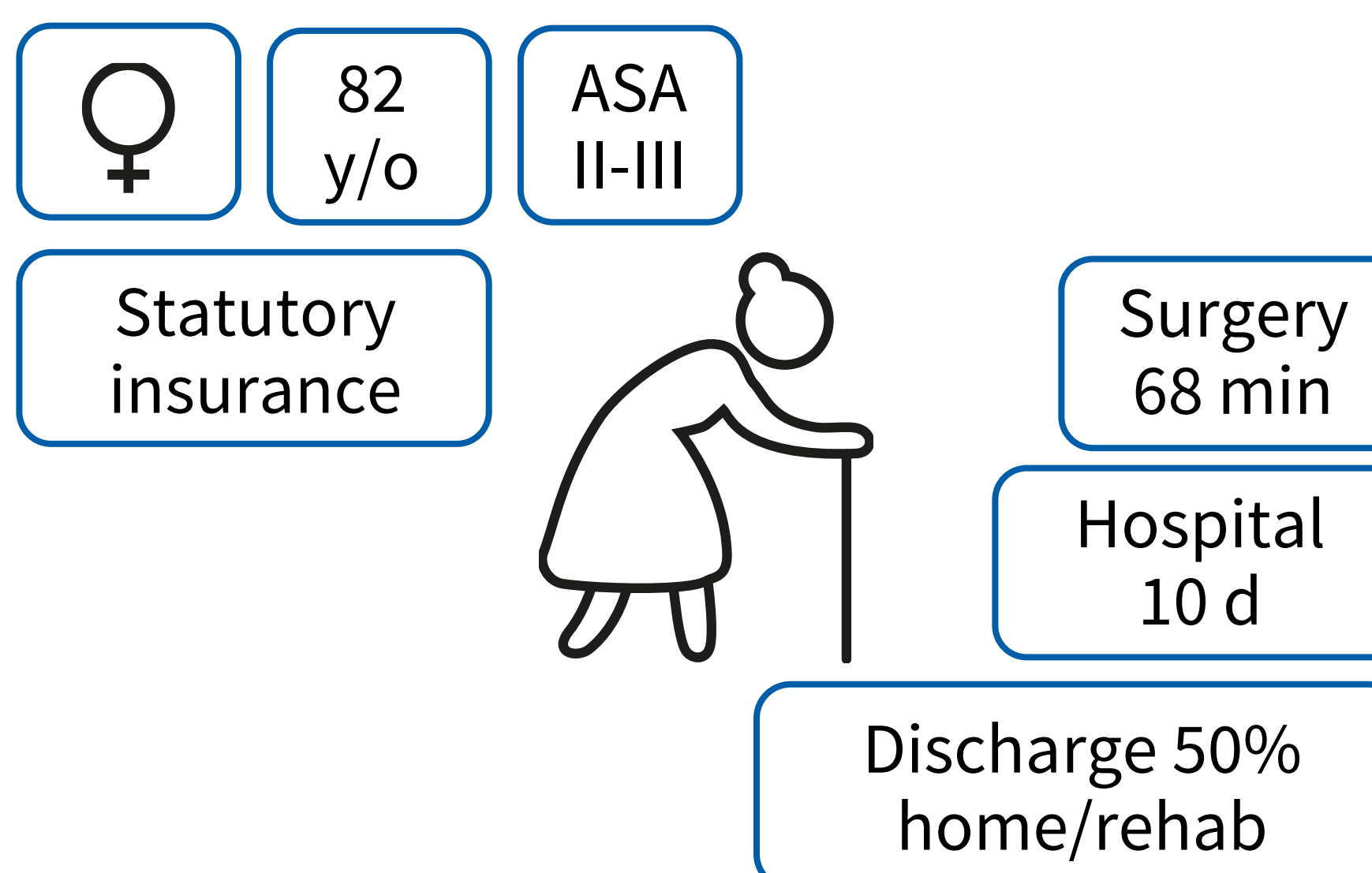
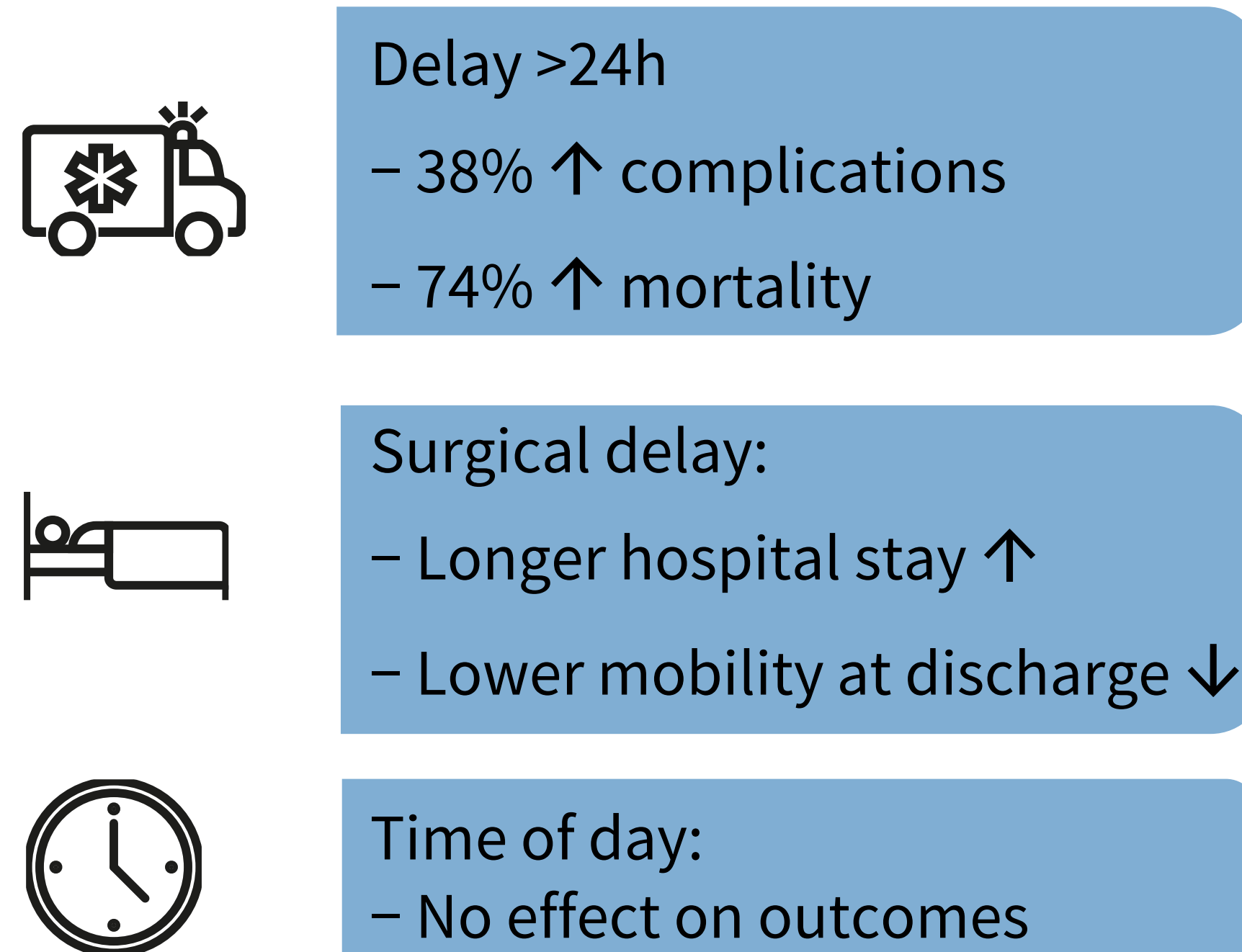


Fig. 2: The average patient was a statutorily insured, elderly woman with comorbidities. Average length of surgery was 68 minutes, length of stay 10 days. 55% of patients were discharged with the aim to return to home.

### OUTCOME



## DISCUSSION

Trochanteric fractures typically occur in elderly patients with frequent adverse events; our study shows that surgical delay is a modifiable risk factor, providing novel, fracture-specific evidence to improve outcomes and guide management.

**Early surgery (<24h)** is associated with lower complications, mortality, and shorter hospital stay.

### Delay >24h

- is an independent predictor for complications.
- did not predict mortality independently, but the occurrence of any complication.

**Night-time surgery** had no higher perioperative risk.

**System-level development is crucial:** Avoiding unjustified delays, ensuring surgical capacity, and orthogeriatric co-management.

## LIMITATIONS

- Population: not generalizable to complex cases or other procedures.
- Retrospective study design limits causal inference.
- Stratification by time only may overlook justified medical delays.
- No fracture subtypes, fixation types, or orthogeriatric care captured → risk of unmeasured confounding.
- No adjustments/propensity matching performed.
- Generalizability restricted to similar healthcare systems; outcomes limited to in-hospital period.

Independent predictors		Sig.	OR	95% CI
for Complications			LL	UL
Delayed surgery > 24 hrs	< 0.001	5.9	4.5	7.7
for Mortality				
Complication	< 0.001	1.4	1.1	1.6

CI = confidence interval, LL = lower limit, OR = odds ratio, Sig. = significance, UL = upper limit

Tab. 1: Modifiable independent predictors of complications and mortality retained in the backwards stepwise logistic regression

