INSELSPITAL
UNIVERSITÄTSSPITAL BERN
BERN UNIVERSITY HOSPITAL

CARDIOVASCULAR CENTER

Functional Outcome of patients after surgery for acute Stanford Type A Aortic Dissection

Murat Yildiz, MD; Maria Nucera, MD; Selim Mosbahi, MD; Kai Münker, MD; Cem Kapkin, MD; Silvan Jungi, MD; Matthias Siepe, MD; Florian Schoenhoff, MD

Cardiac surgery, Inselspital Bern, Switzerland

Background / Study Objective

- TAAD has a profound impact on prognosis but also on quality of life even if the initial event is survived
- Much has been reported on techniques and results of surgery for TAAD
- Data regarding functional outcome of patients after TAAD is scarce

Aim of this study was to:

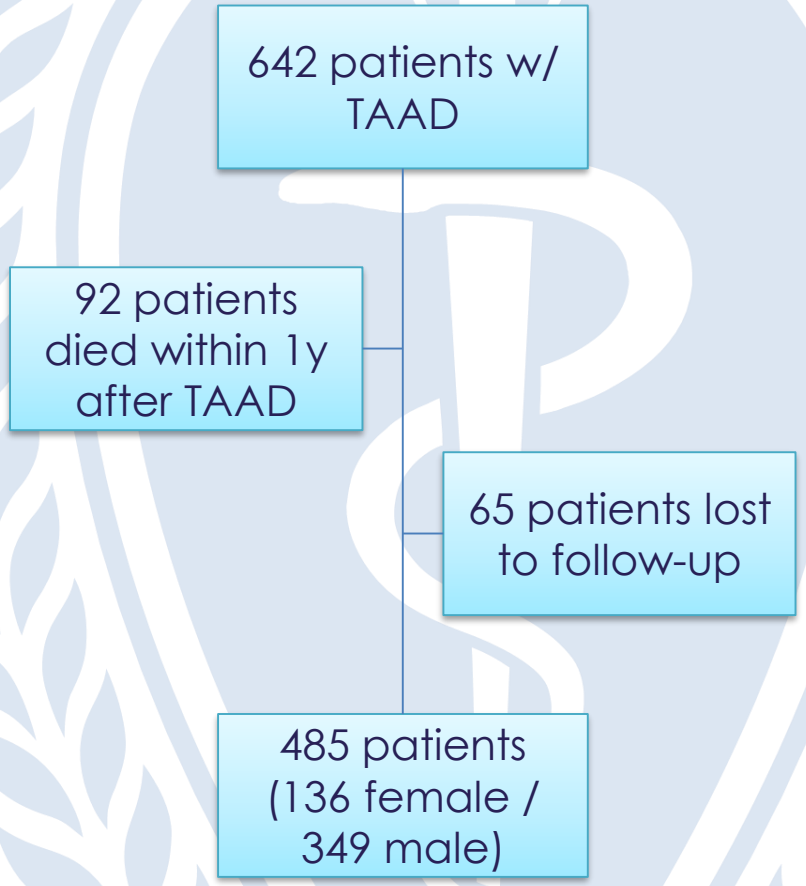
1. Report functional outcome of TAAD patients after 1 year
2. Report morbidity & mortality in TAAD patients after 1 year

Methods

- Retrospective analysis including 642 patients with TAAD from 01/2005 to 12/2021
- Follow-up at 12 months was 90% complete
- Any kind of neurological event (including stroke) was defined as any impairment of neurological function (broad inclusion criteria, including temporary loss of sensibility)
- Acknowledging the expansive scope of this definition, we performed an additional analysis with a more precise classification where we only included CT/MRI-confirmed stroke

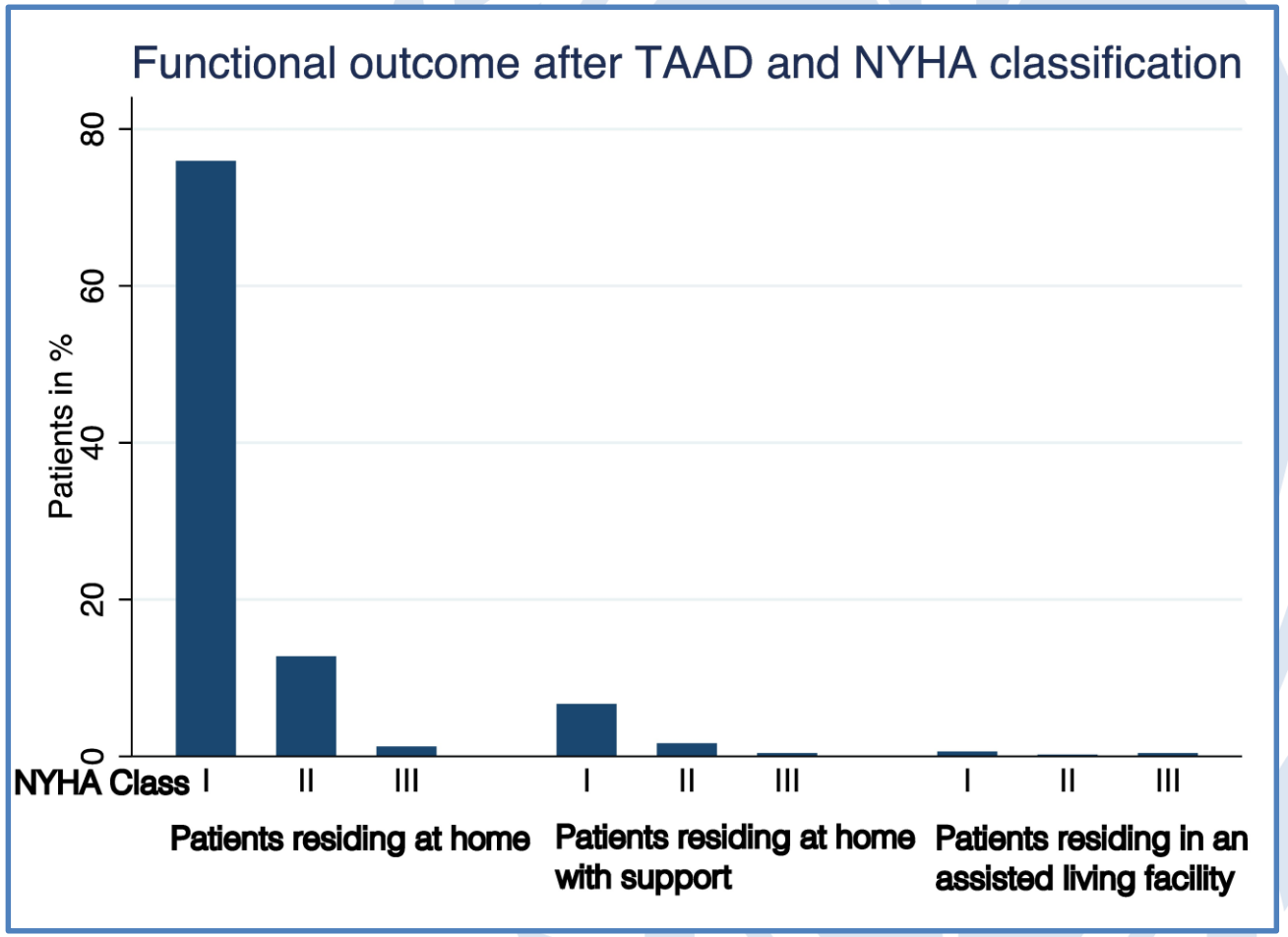
Patients

- 642 patients presented w/ TAAD
- Mean age at TAAD: 62y (95% CI: 61 – 63y)
- Female patients: 30%
- Surgical times:
  - X-clamp: 103min (95% CI: 99 – 107)
  - ACP-time: 31min (95% CI: 30 – 33)
  - Reperfusion time: 54min (95% CI: 48 – 61)
- Procedures:
  - 636 Ascending aortic replacements
  - 232 Bentall procedures
  - 573 partial aortic arch replacements
  - 42 total aortic arch replacements



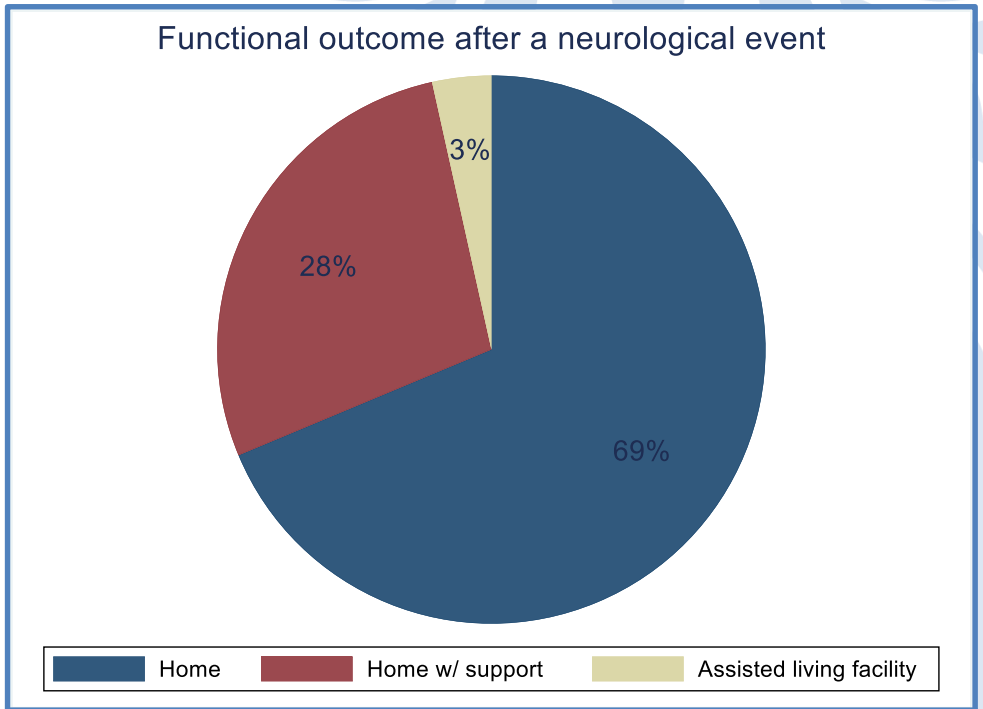
Functional outcome after TAAD

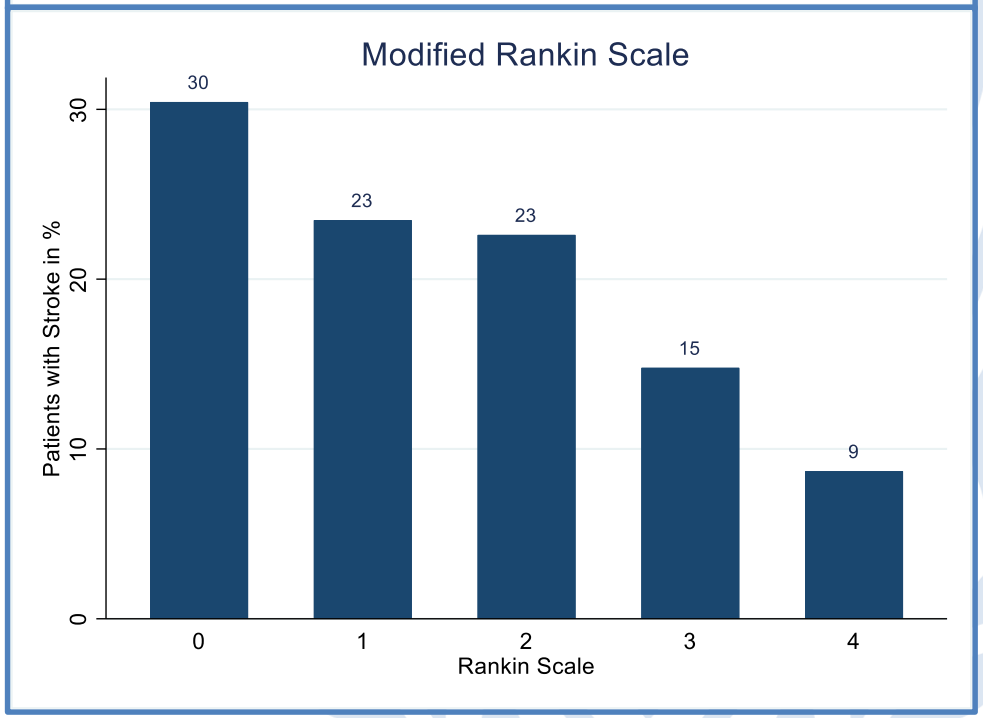
- One year after TAAD, 75% of patients live at home with NYHA I
- No patients with NYHA IV
- Less than 2% are residing in assisted living facility
- After one year, 85% of non-retired patients had returned to work
- 212 (33%) patients were retired after 1 year at mean age of 73y (95% CI: 72 – 74y)



Any kind of neurological event and functional outcomes

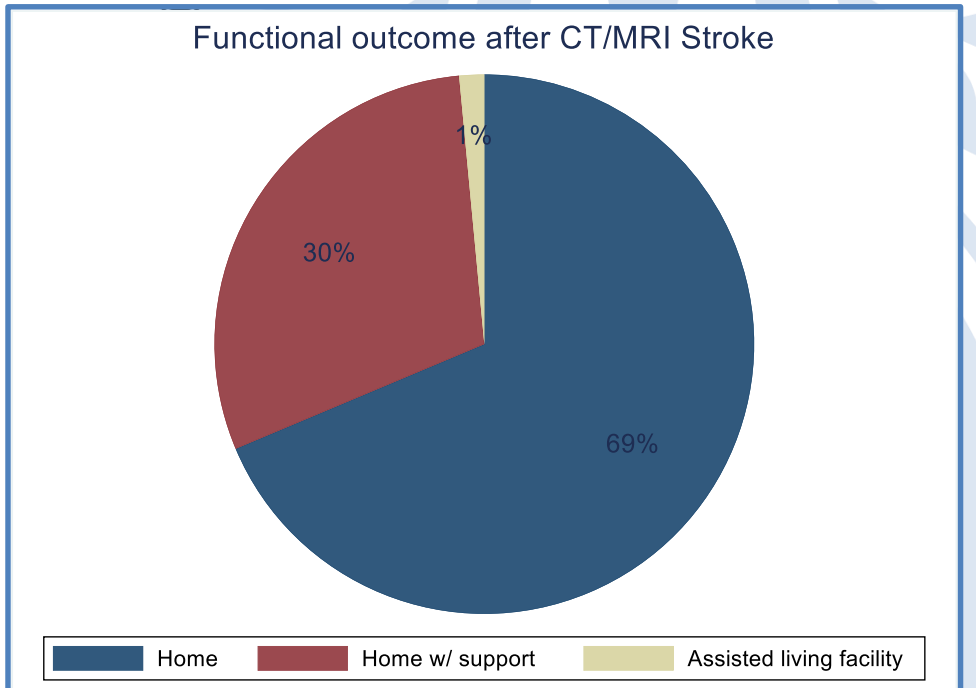
- 148 (23%) patients had a neurological event
- 30% of these patients had no residual limitations 1y after TAAD
- In patients w/ a neurological event, 69% live at home, 28% at home with support and 3% in assisted living facility after one year
- There was no significant correlation between gender and recovery rate (p-value: 0.635)
- Experiencing a neurological event significantly increased the likelihood of residing in an assisted living facility or receiving support at home one year after TAAD (OR = 9.46, 95% CI: 5.06-17.70, p-value:<0.001)

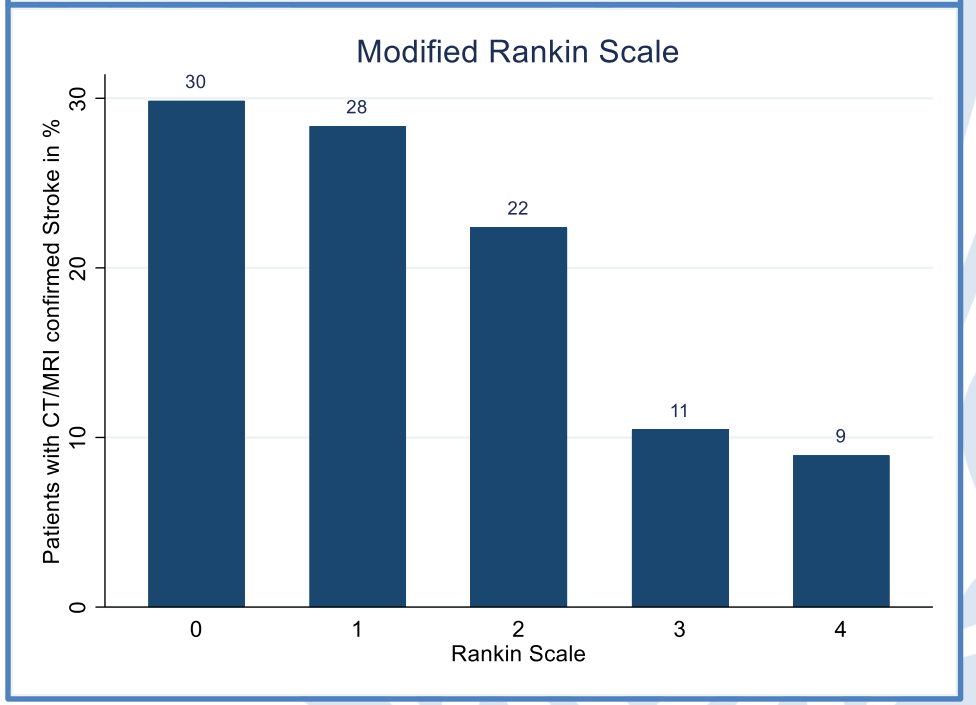




Results with CT- / MRI-confirmed stroke

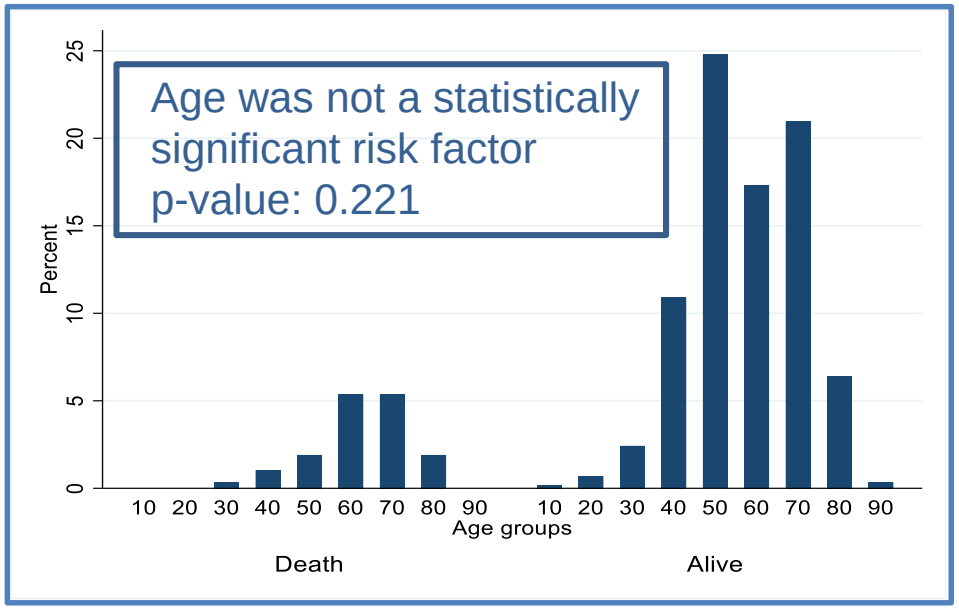
- CT- / MRI- confirmed stroke occurred in 97 (15%) patients
- 30% of all stroke patients had no residual limitations 1y after TAAD
- In patients w/ stroke, 69% live at home, 30% at home with support and 1% in assisted living facility after one year
- There was no significant correlation between gender and recovery rate (p-value: 0.979)
- The history of stroke was a significant risk factor for being in an assisted living facility or at home with support one year post TAAD (OR = 5.5, 95% CI: 2.93-10.34, p-value: <0.001

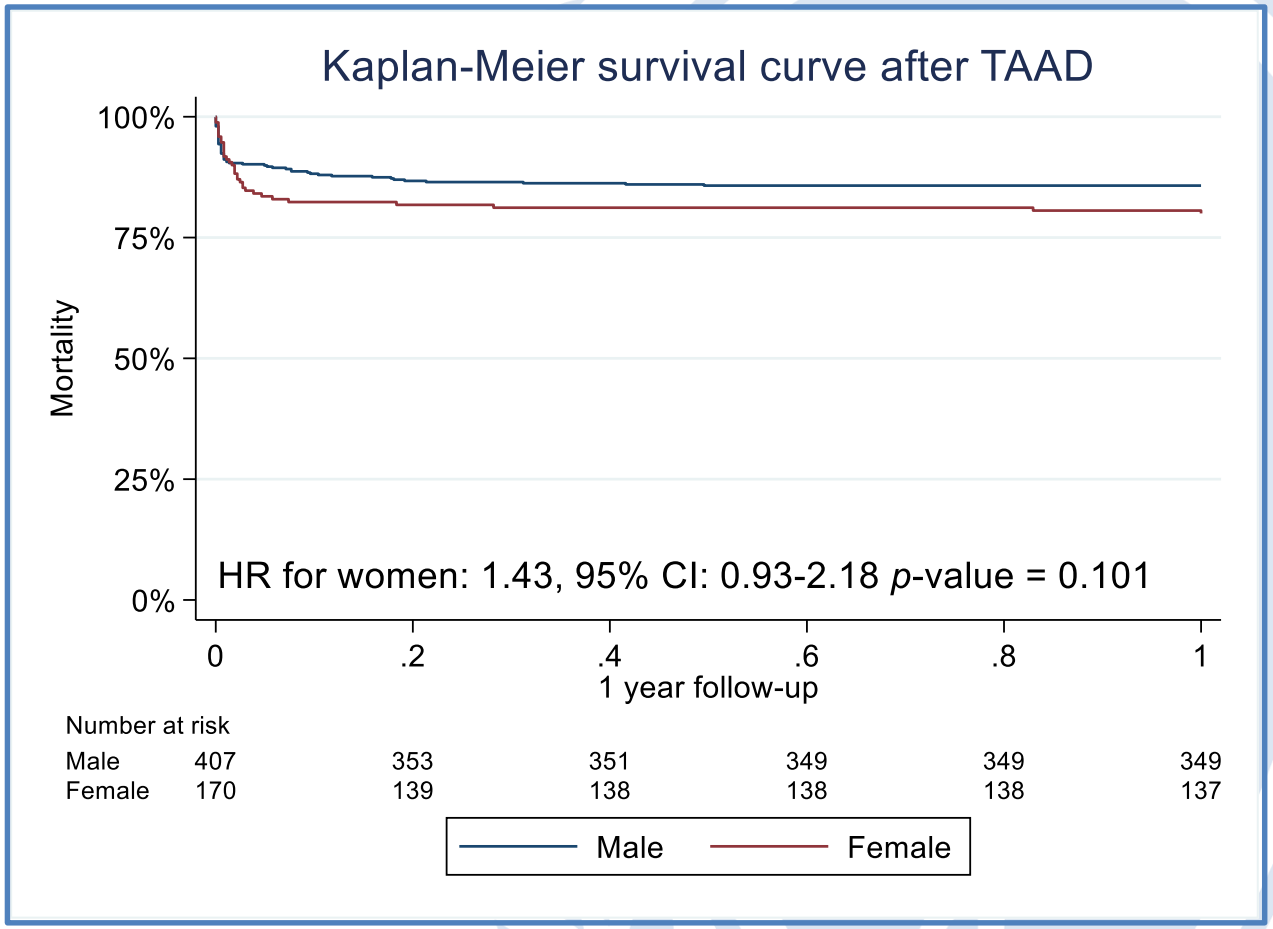




Mortality results

- 30d mortality was 11.8%
- 92 patients (16%) died within 1st year after TAAD
- There was no significant gender difference in mortality (p-value: 0.101)





Conclusions

- After surgery for acute type A aortic dissection, almost 3 out of 4 patients live at home unassisted 1 year after surgery.
- Stroke survivors have a favorable outcome with the majority having mild or no residual neurological deficits at 1 year.
- Nevertheless, experiencing stroke is a risk factor for living in an assisted living facility 1 year after the event.