

# Long-term quality of life in patients with bladder cancer following radical cystectomy

Emine Akdemir<sup>1\*</sup>, Martijn M. Stuiver<sup>1</sup>, Maaïke van de Kamp<sup>1</sup>, Jolanda Bloos – van der Hulst<sup>1</sup>, Laura S. Mertens<sup>1</sup>, Kees Hendricksen<sup>1</sup>, Wim H. van Harten<sup>1</sup>, Anne M. May<sup>2</sup>, Maike G. Sweegers<sup>1</sup>

<sup>1</sup>Netherlands Cancer Institute, Amsterdam, Netherlands <sup>2</sup>University Medical Center Utrecht, Utrecht, Netherlands

## Aim

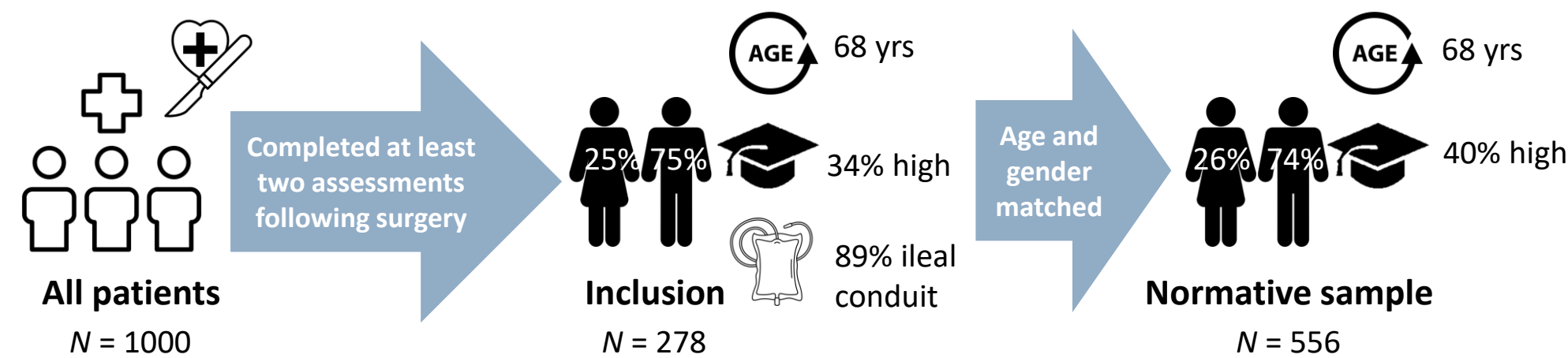
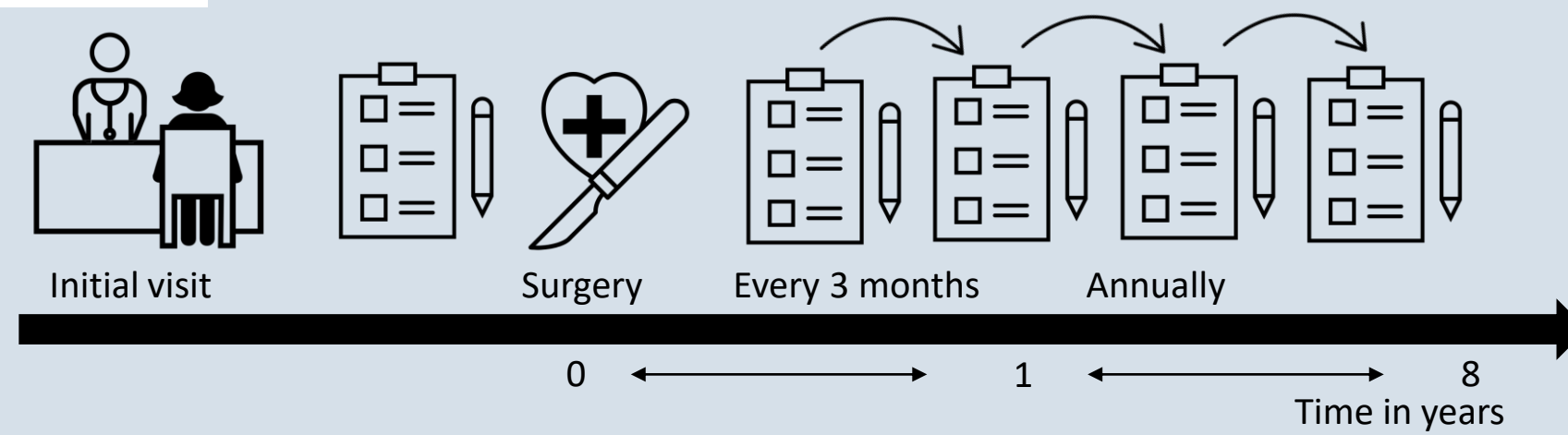
### Investigate quality of life

- 1) Eight years following radical cystectomy and compare with normative sample
- 2) Explore associated patient characteristics
- 3) Examine impact of complications

## Study design and patients

Patients with bladder cancer treated with radical cystectomy at the Netherlands Cancer Institute were invited to complete **EORTC-QLQ-C30** as part of usual care

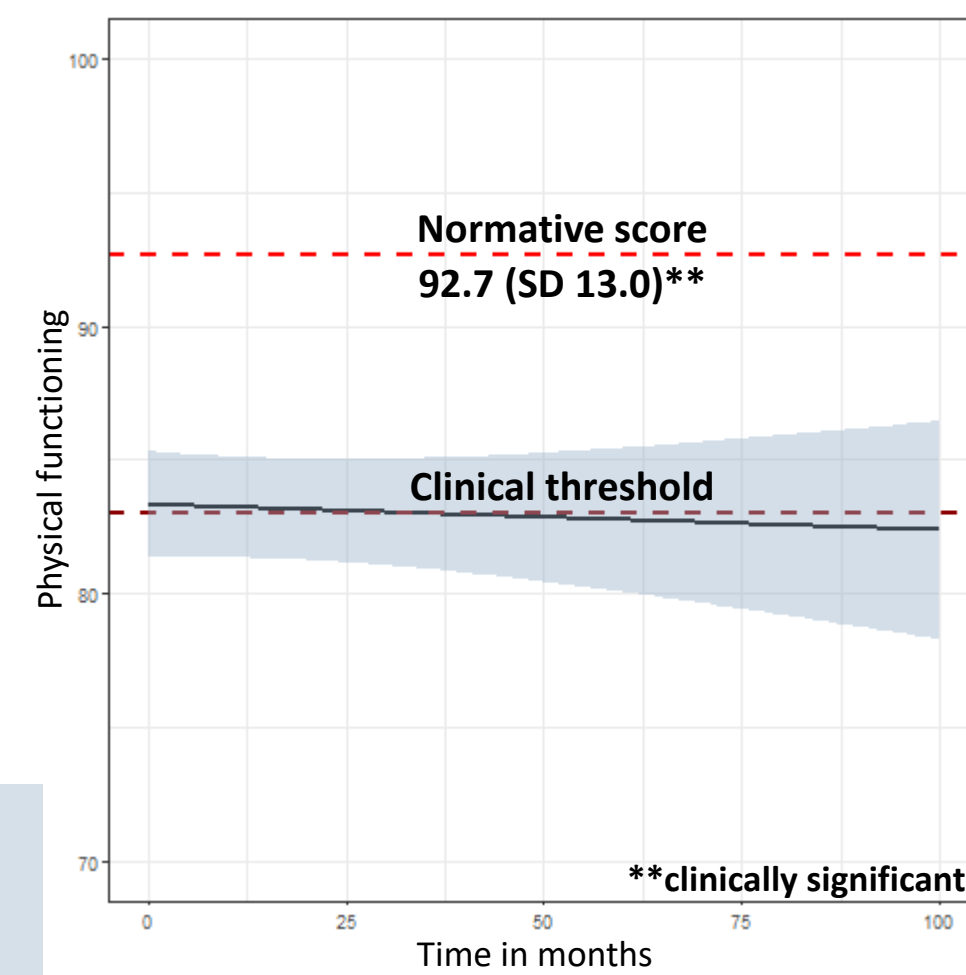
### Study flow



- |  |   |   |
|--|---|---|
| <b>1) Quality of life outcomes</b><br>- Physical functioning<br>- Emotional functioning<br>- Summary score | <b>2) Patient characteristics</b><br>- Age<br>- BMI<br>- Gender<br>- ASA score<br>- Pathological N status | <b>3) Complications</b><br>- 30 days following surgery<br>- Categorized in 0, 1, 2 and ≥3 complications |
|--|---|---|

Clinical thresholds of 83 for physical functioning and 73 for emotional functioning are used as indicators of clinically significant reductions in quality of life

## Results



### 1) Quality of life at eight years follow-up

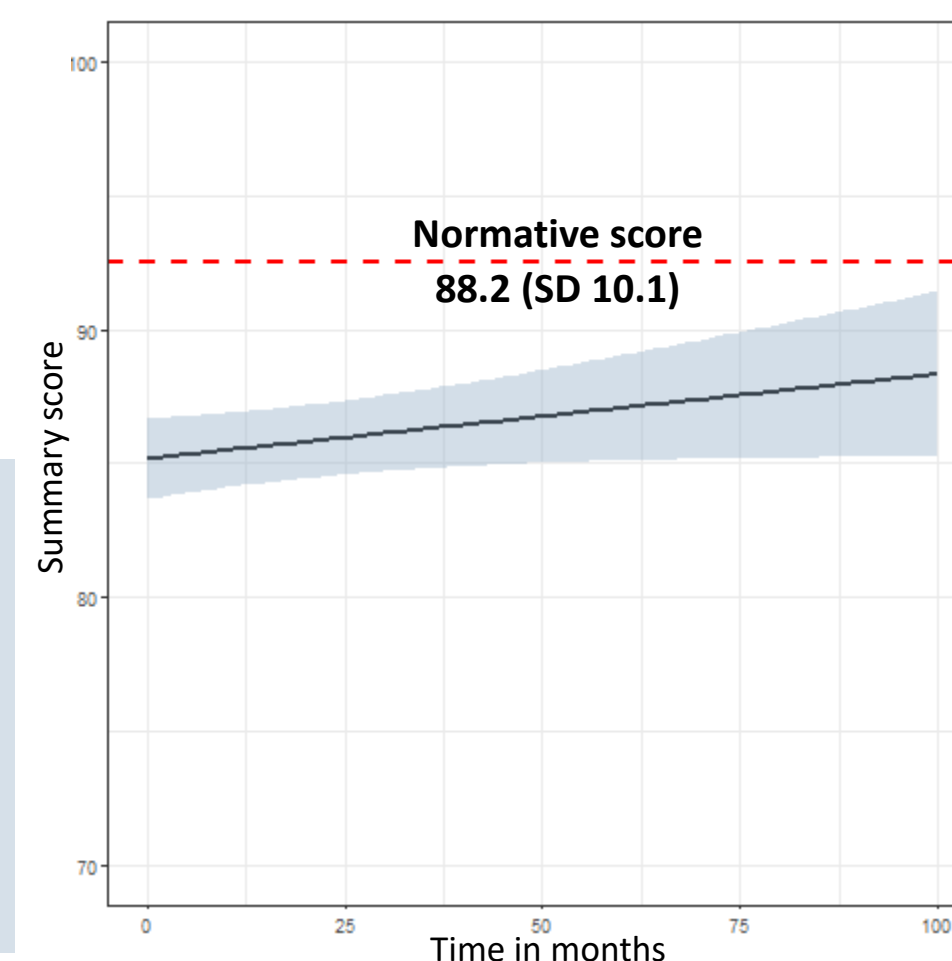
At eight years follow-up, linear mixed effect modeling showed the following mean scores:

- 82.4 (95% CI 78.5 - 86.3) for physical functioning  
 ↓ Decline of -0.9 points
- 88.8 (95%CI 85.4 - 92.3) for emotional functioning  
 ↑ Improvement of 5.1 points
- 88.2 (95%CI 85.2 - 91.2) for summary score  
 ↑ Improvement of 3.0 points

### 2) Associated patient characteristics

The backward selection procedure showed higher ASA scores and age are associated with a worse quality of life trajectory:

- Higher age  $\beta_{\text{interaction}} = -0.01^{**}$  for physical functioning
- ASA score 3 versus 1  $\beta_{\text{interaction}} = -0.2^{**}$  for summary score



### 3) Impact of complications

Two years following surgery, patients with 2 and ≥3 complications had worse post-surgical quality of life compared to those with 1 complication:

- $\beta = -9^*$  and  $-10^{**}$  for physical functioning
- $\beta = -6^*$  and  $-7^{**}$  for summary score

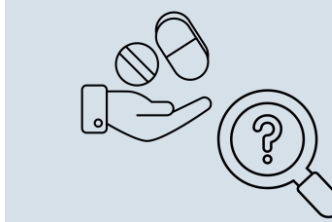
These associations are corrected for age, ASA score, clinical N status, urinary diversion type, surgery type and smoking status.

\*  $p < 0.05$  \*\*  $p < 0.01$

## Future directions



Implementing patient-reported outcomes into clinical practice holds promise for timely detection of declines in quality of life and early intervention



Future studies should focus on identifying modifiable risk factors, investigate effects of interventions and the impact of other treatment options for patients with bladder cancer

## Conclusion

- 1) Physical functioning is clinically significant lower in patients compared to the normative sample, emotional functioning and summary score improve over time
- 2) Older patients and patients with higher ASA scores have worse quality of life trajectories
- 3) Patients with ≥2 complications have comparable quality of life trajectories but worse post-surgical quality of life

### Clinicians are encouraged to initiate supportive care to enhance quality of life, for patients with bladder cancer undergoing surgery

