

## Newcastle-Ottawa quality assessment scale for cohort studies

A maximum of six stars could be given: three in *selection* and three in *outcome*.

### Selection

Exposed cohort: patients who have undergone sphincter-preserving total mesorectal excision (TME) or partial mesorectal excision (PME) for primary rectal cancer.

#### 1. Representativeness of the exposed cohort

- Truly or somewhat representative of the average primary rectal cancer patient having undergone sphincter-saving TME/PME. ✱
  - Truly representative: studies including both women and men (with the same number or slightly more men) who are middle aged or older from a variety of socioeconomic backgrounds and diagnosed with cancer at any stage.
  - Somewhat representative: studies that include both men and women with an appropriate age range and a wide range of cancer stages. Studies could be somewhat representative even if they omit to report the socioeconomic background and cancer stage.
- A star was NOT given when a description of the cohort was missing or when the cohort was a selected group of patients, such as only one sex, a narrow age group (only very young or old patients), exclusively very low or high cancer stage, etc.

#### 2. Selection of the non-exposed cohort

- Not applicable.

#### 3. Ascertainment of exposure

- Patients receiving TME/PME for primary rectal cancer can have been assessed prospectively during clinical examination and surgery or retrospectively from medical/surgical records or a database. ✱
- A star was NOT given when surgery for primary rectal cancer was reported but without a description of how this was documented/identified.

#### 4. Demonstration that patients did not experience urination dysfunction before the surgery

- yes ✱
- no

### Comparability

- Not applicable since control groups were not considered in this systematic review.

### Outcome

Outcome definition: urination dysfunction minimum three months postoperatively.

#### 1. Assessment of outcome

- Clinical examination specifically for urination dysfunction, patient-reported outcome measure (PROM), or urodynamic evaluation. If a continuous measurement tool was used and number of patients with urination dysfunction were reported, studies should have defined (in the paper or by referring to a PROM) which patient symptom score threshold they considered a urination dysfunction. However, if studies reported several assessment methods, at least one method needed to fulfil the described criteria to receive a star for the outcome ✱
  - Studies that reported several urination symptoms only received a star for the overall bias assessment if all symptoms fulfilled the above criteria.
- A star was NOT given when the above criteria was not fulfilled or when the description was missing about how urination dysfunction was assessed.

## 2. Was follow-up long enough for outcomes to occur?

- Studies were included that assessed urination dysfunction minimum three months after surgery. Thereby, studies were excluded that had a mean/median follow-up  $\geq 3$  months if they specified that urination dysfunction was assessed  $< 3$  months postoperatively or when urination dysfunction only was grouped/described along with immediate postoperative complications.
- A star was given when the studies clearly described scheduled follow-up(s)  $\geq 3$  months postoperatively for urination dysfunction or when studies specified that urination dysfunction was assessed  $\geq 3$  months postoperatively. ✱
- A star was NOT given when the study reported a median/mean follow-up  $\geq 3$  months without specifying that urination dysfunction was assessed  $\geq 3$  months postoperatively.

## 3. Adequacy of follow-up of cohorts

- Minimum 90% followed in prospective studies,  $> 60\%$  response rate to questionnaires in retrospective studies, or subjects lost to follow-up unlikely to introduce bias. ✱
- A star was NOT given when  $< 90\%$  was followed,  $< 60\%$  response rate to questionnaires, those lost were likely to introduce bias in the study, or when a statement about completion of follow-up was lacking.