

# Scoping Review of rehabilitation methods after vaginal reconstruction following gynecological malignancies

## INTRODUCTION

A study by the American Cancer Society estimated a total of 94,990 cases of gynecological malignancies for women in 2014, including cancer to the uterine cervix, uterine corpus, ovary, vulva, vagina, and other genital areas[1]. Of the 94,990 cases, a 30.3% mortality rate was expected, or 28,790 deaths[1]. Of all female genital cancers, vulvar cancer accounts for 4% worldwide[1] with surgery being the standard of care[2]. It is essential for vulvar malignancies to be diagnosed early and treated correctly to reduce morbidity as well as improve psychosexual outcomes[3].

The standard surgical treatment in the past included radical vulvectomy and an en bloc resection of the inguinal and often pelvic lymph nodes[3 4]. In order to reduce post-operative complications as well as issue regarding sexual function, body image, and relationships, new surgical strategies have been developed, such as the replacement of the en bloc resection with the triple incision technique and localized excisions[3].

Further, surgical resection that includes reconstructive procedures offers the opportunity to avoid anatomical deficiencies which can negatively affect psychosexual outcomes and quality of life[2]. Reconstruction primary goals include closure with tension-free skin, good quality tissue transfer, vaginal and urethral introitus preservation, and anovaginal partition repair[5]. Sensitivity, sexual function, cosmetic restoration, as well as minimal morbidity of the flap donor site are secondary goals of reconstruction[5].

Rehabilitation after vulva reconstruction is essential for the improvement of sexual function, self-image, urinary continence, and quality of life. The objective of this review is to determine the rehabilitation methods that exist for patients who undergo vulva reconstructions after cancer surgery.

## METHODS

### *Protocol and registration*

The protocol was created using the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines. All protocol checklists, descriptions, and information can be found on the PRISMA Transparent Reporting of Systematic Reviews and Meta-Analysis website.

### *Data items*

The variables for which data is sought are: rehabilitation after vaginal reconstruction following cancer treatment. Rehabilitation includes physical therapy and pelvic therapy protocols for sexual and functional recovery after vaginal and/or vulvar reconstruction. Within this main

concept, we searched for types of rehabilitation protocols for sexual recovery, functional recovery, and urinary continence. We also searched for affiliation of the authors and the funding sources for the publications.

### *Eligibility criteria*

Full, original articles on rehabilitation after vaginal reconstruction following gynecological cancer treatment are included. Rehabilitation includes sexual and functional rehabilitation. Only English language. No date restrictions. No abstracts, books or book chapters, theses or unpublished clinical trials. Only human studies.

### *Information sources*

We will collaborate with a research librarian to develop a comprehensive search strategy in Medline. The search strategy will include text words and controlled vocabulary (MeSH) for gynecological malignancies, female genital reconstruction, and rehabilitation. Medline, PROSPERO, and the Cochrane Library will be searched for existing reviews. The search strategy will be modified and applied to CINAHL Plus for Full Text (Ebsco), Embase (Elsevier), Cochrane Library (Wiley), and PsycInfo (Ebsco). We will not impose restrictions to language, document type, or publication date. Each database will be searched from inception to the present. We will review reference lists of included studies for relevant citations.

### *Search Medline (Ovid) Search Strategy*

1. exp \*Genital Neoplasms, Female/
2. ((gynaecol\* or gynecol\* or endomet\* or cervical or vulva\* or ovarian or vaginal) adj8 (cancer\* or neoplasm\* or carcinoma\* or malignan\*)).ti,ab.
3. 1 or 2
4. exp \*Reconstructive Surgical Procedures/
5. ((vagina or vaginal or gynecologic\* or gynaecologic\* or vulva\* or clitoris or cervix or cervical or female genital\*) adj8 (reconstruct\* or restor\*)).ti,ab.
6. ((vagina or vaginal or gynecologic\* or gynaecologic\* or vulva\* or clitoris or cervix or cervical or female genital\*) and (cancer adj5 treatment\*)).ti,ab.
7. 4 or 5 or 6
8. exp Rehabilitation/
9. exp Physical Therapy Modalities/
10. ((manual or physical or sexual\* or vaginal or incontinen\* or urin\*) adj8 (therap\* or exercise\* or treatment\* or rehab\* or restor\*)).ti,ab.
11. physiotherap\*.ti,ab.
12. 8 or 9 or 10 or 11
13. 3 and 7 and 12

### *Selection of sources of evidence*

Articles that were found based on our search strategy will be uploaded by the research librarian to the Rayyan database. On this database, two independent blinded reviewers would select the titles and abstracts that met inclusion criteria. Any conflicts between reviewers would be resolved through discussion, and if needed with a third reviewer (senior researcher). Then,

after these articles were selected, the two independent reviewers read the full articles included from the first screen and made final determination of the articles to include. Conflicts will be resolved between the two reviewers directly, and if needed with the help of a third reviewer (senior researcher). The final group of articles titles that are included in the analysis will be transferred to excel spreadsheets so thematic analysis can be performed.

### *Data charting process*

The Arksey and O'Malley scoping framework was used to guide the data extraction. In the first screening stage, two independent reviewers will select titles/abstracts that meet inclusion/eligibility criteria on the Rayyan database. This database will then have the selected articles that will be read in full text for stage two of the screening process. The final group of articles that meet inclusion criteria will be uploaded on Excel 2016 workbooks.

### *Synthesis of results*

Methods of rehabilitation were charted from sources. They were then organized by the overarching themes of sexual, recovery, functional recovery, and urinary continence and outcomes analyzed. Similar methods within each desired improvement outcome were identified.

## **REFERENCES**

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