

# Quality of life after extended pelvic exenterations

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## BACKGROUND AND AIM OF THE STUDY

**The aim of the study was to compare health-related quality of life (QoL) and oncological outcome between gynaecological cancer patients undergoing pelvic exenteration (PE) and extended pelvic exenteration (EPE).**

Pelvic exenteration (PE) is an extensive surgical technique serving as a curative procedure for selected patients with locally advanced or recurrent cancers confined to the pelvis [1].

Yet, traditional PE is applicable in tumours localized centrally in the pelvis, but the technique does not allow for a complete removal of tumours attached to or infiltrating pelvic side wall structures.

New extended techniques (EPE) are redefining the boundaries of what constitutes resectable disease. However, these resections involving major structures such as large nerves (obturator, femoral, and sciatic), vessels (common and external iliac), or pelvic bones are associated with new types of morbidity [2, 3].

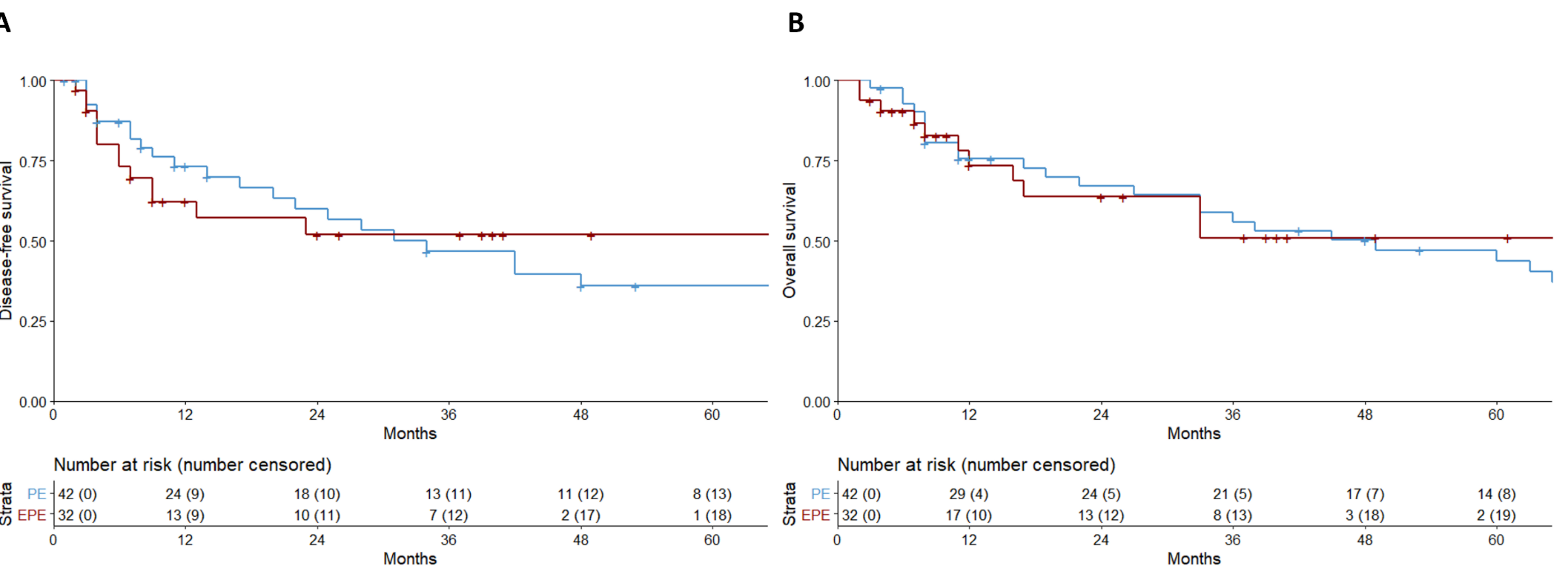
Therefore, although these ultraradical resections offer a chance of cure, the trade-off is a potentially higher rate of postoperative morbidity that could have an impact on QoL.

## RESULTS

Data from 74 patients treated with extensive pelvic resections (42 PE and 32 EPE) for recurrent or persistent gynaecological cancer were analysed (cervical cancer 48.7%, vulvar cancer 25.7%, endometrial cancer 18.9%, and low-grade ovarian cancer 6.8%).

### Oncological outcome

No significant differences in survival were observed between the groups ( $P > 0.999$ ), with median overall and disease-specific survival in the whole cohort of 45 and 49 months, respectively (Figure 2).



**Figure 2.** Disease-free survival (A) and overall survival (B) in patients according to the exenteration extent. Time 0 represents the date of surgery. EPE: extended pelvic exenteration; PE: pelvic exenteration.

### Health-related quality of life

Thirty-one survivors participated in the QoL surveys (20 PE, 11 EPE). No significant differences were observed in global health status ( $P=0.951$ ) or in any of the functional scales. The groups were not differing in therapy satisfaction ( $P=0.502$ ), and expressed similar, high willingness to undergo treatment again ( $P=0.317$ ) (Table 1).

**Table 1** EORTC QLQ 30, EORTC QLQ-CX24 – main results

	Pelvic exenteration		Extended pelvic exenteration		P-value
	N	Mean (SD)	N	Mean (SD)	
<b>Functional Scales (higher value = better functioning)</b>					
Global Health Status	20	62.9 (19.75)	11	64.5 (21.36)	0.951
Physical functioning	20	67.2 (23.92)	11	73.0 (19.62)	0.583
Role functioning	20	57.8 (40.28)	11	60.9 (31.84)	0.951
Emotional functioning	20	75.2 (20.64)	11	81.2 (18.34)	0.427
Cognitive functioning	20	87.8 (16.78)	11	82.3 (11.60)	0.157
<b>Therapy Assessment (higher value = higher satisfaction)</b>					
Would Undergo Again	20	83.8 (28.42)	11	72.7 (28.40)	0.317
Therapy Satisfaction	20	90.0 (18.85)	11	86.36 (17.19)	0.502
Therapy Assessment	20	82.5 (15.75)	11	71.9 (15.03)	0.066

SD: standard deviation.

## CONCLUSIONS

Health-related quality of life is similar after pelvic exenteration (PE) and extended pelvic exenteration (EPE).

After both types of surgical procedures, patients reported good global health status.

All patients reported a good physical, emotional, and cognitive functions with decline in role and social functions.

No significant difference in symptoms' severity or burden was found between the two groups.

No significant difference in survival was found between patients after PE and EPE.

**EPE procedures offer a potentially curative treatment option for patients with recurrent pelvic tumour invading into pelvic wall structures without negative trade-off further compromising long-term life aspects.**

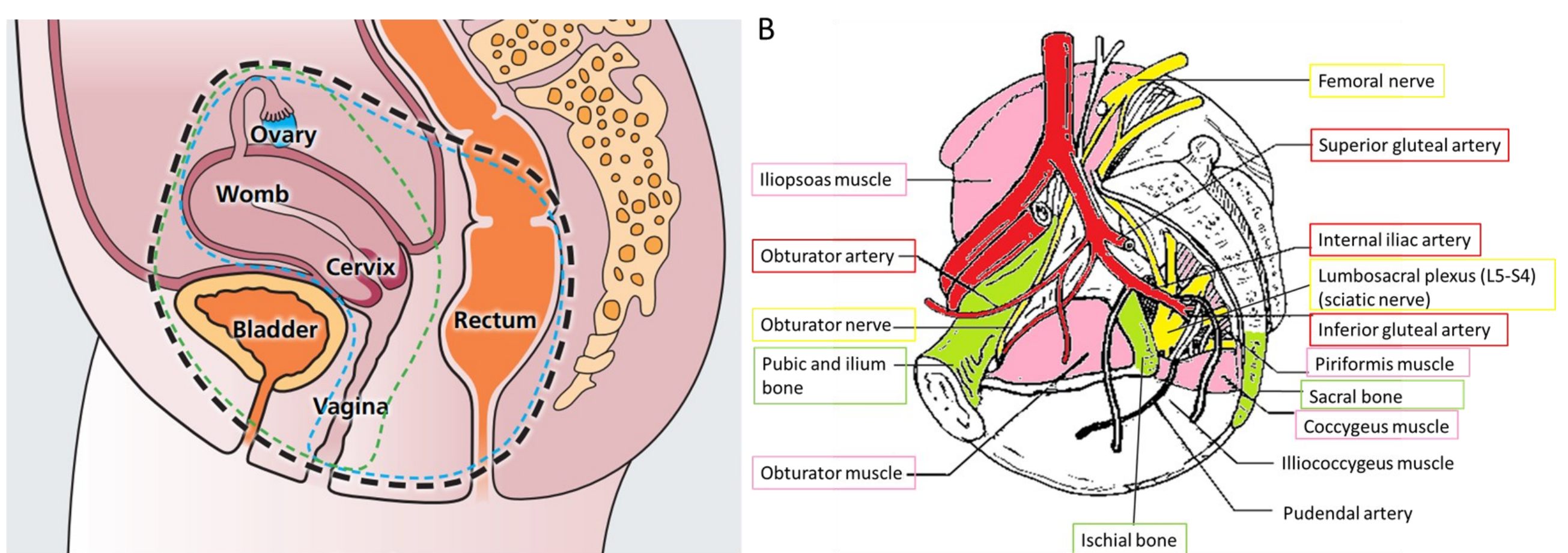
## MATERIALS AND METHODS

Data from patients who underwent PE (42) or EPE (32) between 2004 to 2019 at a single tertiary gynaecology centre in Prague were analysed. Disease-free survival (DFS) was defined as the interval from surgery to the diagnosis of recurrence or progression of the disease. Overall survival (OS) was defined as the interval from surgery to death. OS and DFS were estimated using the Kaplan–Meier method and differences were calculated using the log-rank test.

QoL assessment was performed using EORTC QLQ-C30, EORTC CX-24, and QOLPEX questionnaires specifically developed for patients after (E)PE.

The protocol of the study was approved by the institutional review board. Informed consent forms were obtained from all living patients participating in the QoL surveys.

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**Figure 1.** Graphical depiction of the extent of different surgical approaches. A: Pelvic exenteration (black line: total, green line: anterior, blue line: posterior) adopted [4]; B: Additional pelvic side wall structures resected during extended pelvic exenteration (green: bones; pink: muscles; yellow: nerves; red: vessels)