

Abdominal radical trachelectomy (ART): what's the role in fertility-sparing surgery for cervical malignancies?

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## Abstract

**Objectives:**As abdominal radical trachelectomy (ART) becomes a favored fertility-sparing procedure, the relative contraindication of tumor size  $>2$  cm has been questioned. We report our ART experience in patients with cervical malignancies, describing the surgical, oncologic, and fertility outcomes and discussing the role of ART in fertility-sparing surgery for cervical malignancies.

**Methods:**We conducted a retrospective review of a prospectively maintained database of patients undergoing fertility-sparing ART for cervical malignancies at our institution from April 2004 to 2015.

**Results:**A total of 220 patients with cervical malignancies underwent laparotomy for planned ART. 23 patients needed immediate completion of radical hysterectomy due to unfavorable intraoperative findings. Median age was 30.2 years (range, 11-44 years). Median follow-up was 46 months (range, 8-132 months). Histology included 25 (11.4%) adenocarcinoma, 173 (78.6%) squamous carcinoma, 11 (5%) adenosquamous carcinoma, and 11 (5%) cervical sarcoma. Median number of nodes evaluated was 25 (range, 12-53). Sixty-nine patients with pathologic risk factors received adjuvant therapy. One hundred and nine of 162 stage IB1 cases had tumor size  $\geq 2$  cm. **Two recurrences were observed at 21 months and 38 months after surgery, both of which were poorly differentiated adenosquamous carcinoma. One patient with a recurrence had 4-cm tumor, and she underwent 4 cycles of adjuvant chemotherapy. The other recurrent case had a 2-cm tumor and did not receive any adjuvant treatment. Both were offered salvage surgery and they are now undergoing chemoradiation. For various reasons, only 45 patients attempted to conceive and 7 (15.5%) of them succeeded. Four delivered by cesarean section at 37-39 weeks' gestation, two miscarried, and one is still expecting.**

**Conclusions:** Although two patients had recurrences, ART provides secured oncologic outcomes for selected patients whose tumor size is  $\geq 2$  cm. Patients in our study group had less favorable obstetric outcomes, which may be related to the radicality of the surgery as well as social, familial, and physical factors. In the future, personalized fertility-sparing surgery may be offered to patients based on their different situations.