

Table S1. Details of salvage re-irradiation for locoregional recurrence

| Prior RT type | Age | First relapse site | Relapse pattern | Salvage treatment | Reirradiation technique | Median reirradiation interval (months) | Salvage RT doses | Outcomes | Toxicities |
|---------------|------|--------------------|------------------|-------------------|-------------------------|--|---|----------|---|
| VBT | 58 | Vagina | Intra-RT field | EBRT | Unclear | 26 | Unclear | AWD | Non |
| | 63 | Vagina | Both | Surgery +VBT | 3D VBT | 33 | HRCTV:30Gy/6f | AWD | G2 proctitis |
| | 61 | Vagina/ pelvic | Both | EBRT+VBT | IMRT+3DVBT | 37 | PGTV:60.2Gy/28f, PCTV:50.4Gy/28f, HRCTV:30Gy/6f | AWD | Non |
| | 34 | Pelvic | Outside RT field | EBRT | Unclear | 40 | Unclear | AWD | Non |
| | 67 | Pelvic | Outside RT field | EBRT | IMRT | 17 | PCTV:50.4Gy/28f, PGTV:61.2G/28f | AWD | Non |
| | 42 | Pelvic | Outside RT field | EBRT | IMRT | 40 | PCTV:50.4Gy/28f | AWD | Non |
| | 51 | Vagina | Intra-RT field | VBT | 2D VBT | 9 | 30Gy/6f | AWD | G1 proctitis |
| | 32 | Pelvic /PALM | Outside RT field | EBRT | Unclear | 23 | Unclear | AWD | Non |
| 62 | PALM | Outside RT field | EBRT | IMRT | 24 | PCTV:50.4Gy/28f | AWD | Non | |
| EBRT+VBT | 62 | Vaginal | Intra-RT field | EBRT | TOMO | 120 | PCTV:70.4Gy/33f | AWD | G2 mucous toxicity |
| | 57 | PALM | Outside RT field | EBRT | IMRT | 20 | PCTV:45Gy/25f, PGTV:62.5Gy/25f | AWD | Non |
| | 79 | PALM | Outside RT field | EBRT | TOMO | 7 | PCTV: 50Gy/20f PGTV: 60Gy/20f | DOD | G3 haematological toxicity and G2 gastrointestinal toxicity |

AWD: alive without disease. DOD: died of disease.

Table S2. The distribution of PALM according to the ESMO-ESGO-ESTRO risk classification

| PALN | ESMO-ESGO-ESTRO risk classes | | | | p |
|----------------|------------------------------|-------------------|------------------------|-----------|-------------|
| | Low risk | Intermediate risk | High intermediate risk | High risk | |
| Non-recurrence | 12(92.3%) | 14(87.5%) | 10(55.6%) | 16(84.2%) | 0.04 |
| Recurrence | 1(7.7%) | 2(12.5%) | 8(44.4%) | 3(15.8%) | |

ESMO-ESGO-ESTRO: European Society for Medical Oncology (ESMO)–European Society of Gynecological Oncology (ESGO) – European Society for Radiotherapy & Oncology (ESTRO)

Table S3.Independent risk factors of Cox regression analysis for on survival after recurrence in PALM patients group

| | Multivariate Cox Regression | | | |
|--------------------------|-----------------------------|--------|--------|--------------|
| | HR | 95% CI | | p |
| Age (years) | | | | |
| <65 | Reference | | | 0.101 |
| ≥65 | 5.314 | 0.722 | 39.114 | |
| Prior radiotherapy modes | | | | |
| VBT | 0.637 | 0.096 | 4.231 | 0.641 |
| EBRT±VBT | Reference | | | |
| Failure pattern | | | | |
| Isolated PLAM | Reference | | | 0.423 |
| With pelvic recurrence | 4.454 | 0.226 | 87.72 | 0.326 |
| With distant metastasis | 0.429 | 0.081 | 2.285 | 0.322 |
| Salvage treatment | | | | |
| RT | 0.02 | 0.001 | 0.595 | 0.024 |
| without RT | Reference | | | |

FIGO: International Federation of Gynecology and Obstetrics; VBT: vaginal brachytherapy; EBRT: external beam radiotherapy; PALM: para-aortic lymph nodes metastasis

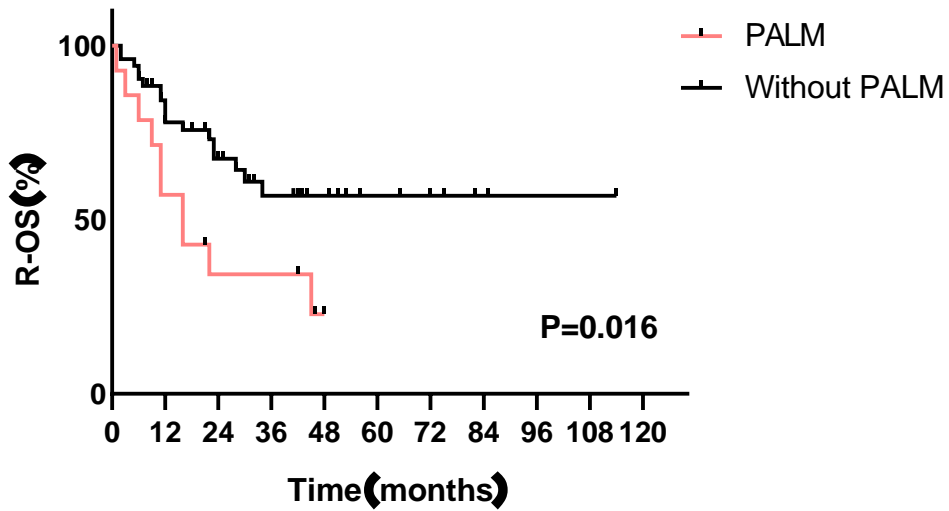


Figure S1. Kaplan-Meier estimates of survival after recurrence (R-OS) according to the status of para-aortic lymph node.

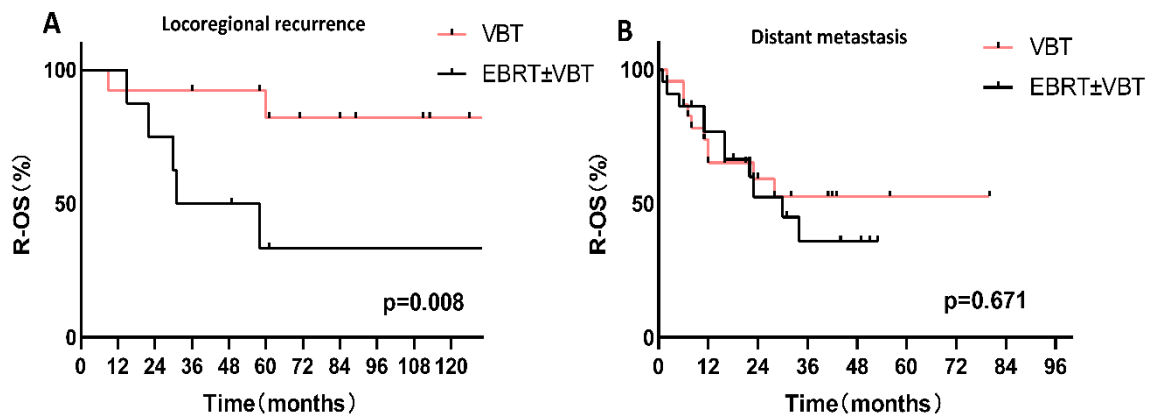


Figure S2. Kaplan-Meier estimates of survival after recurrence (R-OS). (A) R-OS for locoregional recurrence patients categorized by prior RT mode. (B) R-OS for distant metastasis patients categorized by prior RT mode.