

Supplementary Table S1. Comparison of patients' characteristics between the exploratory (n=48) and the validation cohort (n=237).

| Clinical variable | Exploratory cohort Mean (SD) or n (%) | Validation cohort Mean (SD) or n (%) | p-value* |
|---------------------------------|--|---|----------|
| Age, years (SD) | 59.5 (9.8) | 61.1 (10.1) | 0.320 |
| BMI, mean (SD) | 25.4 (3.6) | 24.9 (3.9) | 0.448 |
| Breast diameter, cm (SD) | 12.1 (2.6) | 12.2 (2.7) | 0.790 |
| Breast CTV, cc (SD) | 351.5 (215.4) | 403.2 (574.7) | 0.316 |
| Follow-up, years (SD) | 10.4 (3.5) | 10.3 (4.1) | 0.847 |
| Diabetes mellitus | | | 0.729 |
| No | 46 (95.8) | 221 (93.2) | |
| Yes | 2 (4.2) | 16 (6.8) | |
| Hypertension | | | 0.462 |
| No | 33 (68.8) | 178 (75.1) | |
| Yes | 15 (31.3) | 59 (24.9) | |
| Vascular disease | | | 0.903 |
| No | 45 (93.8) | 218 (92.0) | |
| Yes | 3 (6.3) | 19 (18.0) | |
| Tabagism | | | 0.020 |
| Never | 35 (72.9) | 207 (87.3) | |
| Current or former | 13 (27.1) | 30 (12.7) | |
| Alcohol | | | 0.989 |
| No | 46 (95.8) | 230 (97.0) | |
| Yes | 2 (4.2) | 7 (3.0) | |
| Post-surgical complications | | | |
| None | 39 (81.3) | 200 (84.4) | 0.746 |
| Seromas and hematomas | 9 (18.8) | 37 (15.6) | |
| Neoadjuvant CT | | | 0.743 |
| No | 47 (97.9) | 231 (97.5) | |
| Yes | 1 (2.1) | 6 (2.5) | |
| Adjuvant treatments | | | 0.245 |
| None | 7 (14.6) | 33 (13.9) | |
| Chemotherapy (C) | 13 (27.1) | 48 (20.3) | |
| Hormone Therapy (HT) | 16 (33.3) | 115 (48.5) | |
| C+HT | 12 (25.0) | 41 (17.3) | |
| Radiation quality | | | 0.903 |
| X-rays | 44 (91.7) | 219 (92.4) | |
| γ -rays | 4 (8.3) | 18 (7.6) | |
| Dose/fraction | | | 0.772 |
| 2 Gy | 47 (97.9) | 227 (95.8) | |
| 1,8 Gy | 1 (2.1) | 10 (4.2) | |
| Boost dose/fraction | | | 0.731 |
| 3 Gy | 10 (20.8) | 62 (26.2) | |
| 1.5-2 Gy | 34 (70.8) | 155 (65.4) | |
| No boost | 4 (8.3) | 20 (8.4) | |
| Acute skin toxicity, RTOG grade | | | 0.861 |
| 0-1 | 32 (66.7) | 164 (69.2) | |
| \geq 2 | 16 (33.3) | 73 (30.8) | |

*The chi-squared test was used for assessing differences among groups in the distribution of categorical variables, while the Student's t-test or the Welch's F test was applied, respectively, for continuous variables with equal or unequal variances. BMI, body mass index; CT, chemotherapy; CTV, clinical target volume; HT, hormone therapy; n, number; RTOG, Radiation Therapy Oncology Group; SD, standard deviation.