**APPENDIX (1): Acute skin reactions scoring scale (Modified RTOG scale)**

|  |  |
| --- | --- |
| Description  | Grade  |
| No visible change  | Grade 0 |
| Faint/dull erythema  | Grade 1 |
| Tender/bright erythema +/- dry desquamation  | Grade 2 |
| Patchy moist desquamation, moderate edema  | Grade 3 |
| Confluent moist desquamation, pitting edema  | Grade 4 |

**\*Reference:** RTOG scoring criteria for acute radiation skin reactions. Available at: https://www.researchgate.net/figure/RTOG-Scoring-Criteria-for-Acute-Radiation-Skin-Reactions\_tbl3\_49780739 (Accessed: December 20, 2022).

**APPENDIX (2): Acute skin reactions scoring scale** (**CTCAE version 4.03)**

|  |  |
| --- | --- |
| Grade  | Description  |
| Grade 0  | No changes |
| Grade 1  | Faint erythema or dry desquamation  |
| Grade 2 | Moderate to brisk erythema; patchy moist desquamation, mostly confined to skin fold and creases; moderate edema  |
| Grade 3 | Moist desquamation in areas other than skin folds and creases; bleeding induced by minor trauma or abrasion  |
| Grade 4 | Life threatening consequences; skin necrosis or ulceration of full thickness dermis; spontaneous bleeding from involved site; skin graft indicated  |
| Grade 5 | Death |

**\*Reference:** CTCAE files National Institutes of Health. U.S. Department of Health and Human Services. Available at: https://evs.nci.nih.gov/ftp1/CTCAE/About.html (Accessed: December 15, 2022).

**APPENDIX (3): Modified late effects on normal tissues(LENT SOMA tables)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| The late effect  | Grade 1(mild) | Grade 2(moderate) | Grade 3(marked) | Grade 4 |
| fibrosis | Barely palpable increased | Definite increased density andfirmness | Very marked density, retraction, andfixation |  |
| Telangiectasia | < 1 cm2 | 1-4 cm2  | > 4cm2 |  |
| Hyperpigmentation | mild | moderate | sever |  |
| Retraction/Atrophy | 10 - 25% | > 25 - 40% | > 40 - 75% | Whole breast |

\***Reference**: RTOG Late Effects Working Group. (1995). LENT SOMA tables. Radiother Oncol, 35, 17-60.

**APPENDIX (4): Harvard Scale for the cosmetic outcome:**

|  |  |
| --- | --- |
| Excellent  | The irradiated breast looks like the contralateral one. |
| Good | Minimal but identifiable radiation effects on treated breast. |
| Fair | Significant effects on treated breast which clearly visible.  |
| poor | Sever morbid radiation sequels.  |

* **Reference:** Harvard scale (4-point Likert Scale).Available at: https://www.researchgate.net/figure/Harvard-scale-4-point-Likert-scale\_tbl2\_295073107 (Accessed: December 20, 2022).