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**Acute normal tissue reaction (moist desquamation) in patients with early breast cancer treated with 30Gy in 6 fractions over 15 days: Results of a pilot study**

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**Introduction:** If the high fractionation sensitivity of breast cancer is confirmed by the NCRI Standardisation of Radiotherapy (START) trial, the implication is that larger fraction sizes have no disadvantages, and may have significant advantages, for women with early breast cancer. A single arm pilot study was designed to examine the effect of delivering large fraction size over a shorter treatment time on acute normal tissue reaction.

**Procedures:** Radiotherapy was delivered to 30 patients suitable for whole breast radiotherapy (no boost) after local excision of early breast cancer (Age  $\geq$  50, pT2  $<$ 3.0cm, pN-, LV-, negative margins).. The dosimetry fulfilled ICRU 50 guidelines; IMRT was used where required. Follow-up forms recording severity of skin reaction: erythema and moist desquamation (Grade 0 = None, 1 = Mild, 2 = Moderate, 3 = Severe) were completed weekly for 7 weeks. The primary end point was moist desquamation.

**Results:** Grade 1 or 2 moist desquamation was recorded in 4 patients out of 30 (13.3%). Erythema for each of these cases had a maximum grade of 2 and was otherwise unremarkable for the test group.

**Conclusions:** This pilot study found that 30Gy in 5 fractions over 15 days did not result in a higher incidence of moist desquamation or severity of erythema for patients than might be expected after 50Gy in 25 fractions over 35 days.