INFLUENCING FACTORS
There are various factors that influence how people react to radiotherapy. These are:

- Intrinsic factors to include demographic or disease related characteristics such as age, hormonal status, infection, ethnic origin and co-existing disease.

- Extrinsic factors are treatment related and influence the delivery of therapy. They include treatment dose, volume, fractionation, adjuvant chemotherapy, site of treatment and energy.

- The goal of management is to identify the degree of risk and adopt strategies to delay onset of skin reactions.

ASSESSMENT OF RADIATION SKIN REACTIONS
It is essential to assess the patient's potential for skin reactions prior to commencement of treatment and to review the condition of the skin on a regular basis.

- Different assessment tools exist.

- Radiotherapy departments should have an agreed review process that incorporates assessment and monitoring of skin reactions using an agreed scoring criteria such as RTOG/EORTC.

- Skin reactions should be graded and recorded regularly by an appropriately trained member of the multidisciplinary team.


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RTOG 2b: Patchy moist desquamation, moist oedema
- Dress the moist area with hydrogel, hydrocolloid or alginatre dressing.
- Aqueous cream can still be applied to other parts of the field.

RTOG 3: Confluent moist desquamation
- Dress with hydrogel, hydrocolloid, or alginatre dressing suitable for the amount of exudates.
- Take a swab if there are any signs of infection.

Skin types
All patients develop radiation induced skin reactions in the same way regardless of ethnic origin. Variations in the degree of reaction may depend on individual responses to treatment related to risk factors as listed previously. These photographs show dull erythema on the breast with moist desquamation in the inframammary fold in a patient from an African-Caribbean background.
INTRODUCTION
This is a summary of the main findings from the literature review, to develop a clinical guideline for acute radiotherapy induced skin reactions in cancer patients.

Many patients have fears and anxieties around skin reactions from radiotherapy. The literature suggests that education regarding the care of early radiation skin reactions should be an essential part of the management process for patients undergoing radiotherapy. Patients should be given information about skin reactions and self care strategies.

According to the literature:
- A variety of practices are used in the UK for skin care.
- Differing advice is given to patients.
- Uncertainty exists around what topical agents or dressings should be used.

The literature advises that since radiation skin changes cannot be prevented, the goal for the patient is to delay onset of symptoms. Therefore, avoid factors that exacerbate the inevitable radiation damage. The aim of any care strategy should be to minimise symptoms and to promote comfort for as long as possible.

PATIENT INFORMATION
Patients should be given both written and verbal information, which specify:
- How and why skin reactions occur
- When they are likely to appear
- What they will look and feel like
- How they will be treated
- Where the reaction is likely to occur
- Self care strategies
- Risk factors

INCIDENCE
- Incidence of skin reactions has not been quantified.
- Treatment areas commonly sited as having a higher incidence are those of head and neck, breast and chest wall fields and areas containing skin folds.

MINIMISING ACUTE SKIN REACTIONS
The literature gives the following recommendations for reducing irritants to irradiated skin:

<table>
<thead>
<tr>
<th>Sun exposure</th>
<th>Protect from direct sun exposure: cover or shade area</th>
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<tbody>
<tr>
<td>Mechanical irritants</td>
<td>Minimise friction: wash or shower gently; avoid using a washcloth; pat dry with a soft, clean towel; wear loose fitting, soft clothing</td>
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<td></td>
<td>Avoid shaving or shave causing as little trauma to skin as possible</td>
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<td></td>
<td>Avoid scratching</td>
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<td></td>
<td>Avoid rubbing vigorously and massaging</td>
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<td>Avoid use of adhesive tape in treatment field</td>
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<tr>
<td>Chemical irritants</td>
<td>Use mild soap and rinse thoroughly</td>
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<td></td>
<td>Apply only recommended substances</td>
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<td></td>
<td>Avoid use of deodorants</td>
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<td></td>
<td>Use mild detergent to wash clothing</td>
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<tr>
<td>Thermal irritants</td>
<td>Use tepid water</td>
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<td></td>
<td>Avoid exposure to temperature extremes</td>
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<td>Avoid application of excessive heat (e.g. heating pad, hot water bottle, sun lamp)</td>
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MANAGEMENT
The following photographs include a brief summary of the management principles to be adopted

RTOG 0: No visible change to skin
- Aqueous cream to delay onset of skin reactions
- Wash skin during therapy.

RTOG 1: Faint or dull erythema
- Advise patient to use aqueous cream frequently to soothe and moisturise.

RTOG 2a: Tender or bright erythema
- Advise your patient to apply aqueous cream.
- Hydrocortisone 1% may be used sparingly on itchy or very sore areas.
- If the skin breaks they should discontinue the cream and ask for further advice.