

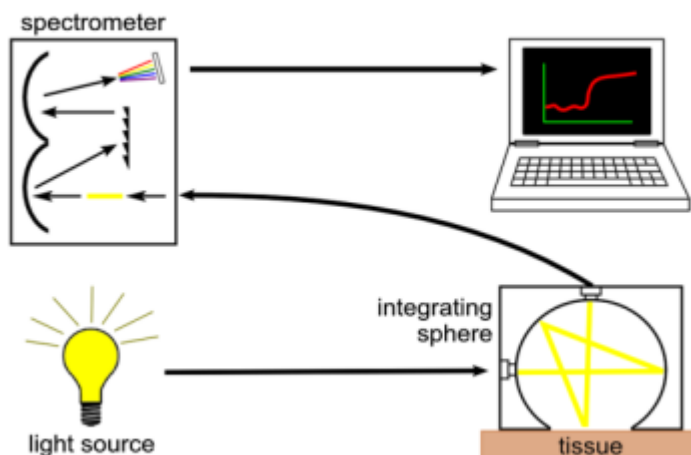
# SkinDisease with Erythema

Skin erythema, or flare, is the reddening reaction of the skin as a result of an external stimulus , immunological reaction with/out hypersensitivity to an allergen or viral infection

➤ The flare size depends on multiple parameters, for instance, distribution of the neural fibers and vascularization of the stimulated region.

➤ Likewise, the strength and the nature of the stimulus are factors that influence the intensity is reached shortly after the stimulus onset. In some cases, the flare is a result of an accumulative process, such as radiotherapy treatment for cancer.

➤ Radiation dermatitis is an equivalent term to radiotherapy-induced erythema. In this case, erythema is a cancer radiotherapy treatment linked side effect.



➤ The dermatitis reaction is interpreted as a skin response to damage to basal cells present in the epidermal layer. To ameliorate the damaged region, deeper skin layers proliferate to

## Functional Requirements For Erythema

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replace the impaired, superficial . The radiation dermatitis MED trigger is inconstant

### Techniques :

A major goal for any skin erythema assessment technique is to objectively quantify the redness without the need for a skin biopsy or direct contact.



A potential approach is a contactless technique that generates a real time graded redness intensity map. Moreover, it is anticipated that the erythema assessment standard device is miniaturized, easy to operate, and costeffective.

| Grade | Reaction   |
|-------|--|
| 1     | Marginal reaction  |
| 2     | Slight perceptible erythema  |
| 3     | A greater than slight reaction which is not sufficient to be classed as distinct       |
| 4     | Erythema   |
| 5     | A greater than distinct reaction which is insufficient to be classed as well developed |

This section reviews the techniques that were employed within the last three decades , to evaluate, grade or detect skin erythema.