

# A MASCC-led International Delphi Consensus Study To Develop a Revised Acute Radiation Dermatitis Scoring Tool



Shirley SW Tse MBBS<sup>1</sup>, Julie Ryan Wolf PhD MPH<sup>2</sup>, Corina van den Hurk PhD<sup>3</sup>, Raymond Chan PhD<sup>4</sup>, Edward Chow MBBS PhD<sup>5</sup>, Shing Fung Lee MBBS MSc<sup>6,7</sup>, J. Isabelle Choi MD<sup>8</sup>, Jennifer YY Kwan MD PhD<sup>9</sup>, Henry C Y Wong MBBS<sup>10</sup>

<sup>1</sup> United Christian Hospital, Queen Elizabeth Hospital, Hong Kong S.A.R, China <sup>2</sup> University of Rochester Medical Center, USA <sup>3</sup> Santeon, the Netherlands <sup>4</sup> Flinders University, Australia <sup>5</sup> Sunnybrook Health Sciences Centre, Canada <sup>6</sup> National University Cancer Institute, Singapore <sup>7</sup> Yong Loo Lin School of Medicine, Singapore <sup>8</sup> Memorial Sloan Kettering Cancer Center, USA <sup>9</sup> University of Toronto, Canada <sup>10</sup> Princess Margaret Hospital, Hong Kong S.A.R, China

## Introduction

- This Delphi study seeks to develop an accurate and objective grading system to aid clinicians and researchers in assessing severity of acute radiation dermatitis (RD).

## Method

- A Delphi consensus process was initiated through an electronic survey.
- International experts with clinical or research interests in RD from the Multinational Association of Supportive Care in Cancer (MASCC) were invited to participate.
- Additional participants were recruited through snowball sampling.
- Participants were asked about their degree of agreement on statements related to the conceptualization, categorization, components and grading of the tool.
- Consensus was defined as more than 75% agreement among participants.
- Statements that did not reach consensus were revised, followed by subsequent rounds of voting.

## Conclusion

- This is the first Delphi consensus study to develop a revised scoring tool for the assessment of acute RD. Further studies are planned to validate the tool in a diverse group of patients and test its inter-rater reliability amongst patients, clinicians and researchers.

### STEP 1

Instructions: To be filled in by the patient.

Please rate the severity of each symptom below caused by the skin reactions associated with your radiation treatment:

Symptom	Severity				
Skin dryness	None	Mild	Moderate	Severe	Very severe
Itchiness	None	Mild	Moderate	Severe	Very severe
Change in pigmentation	None	Mild	Moderate	Severe	Very severe
Redness/ rash	None	Mild	Moderate	Severe	Very severe
Pain	None	Mild	Moderate	Severe	Very severe
Burning sensation	None	Mild	Moderate	Severe	Very severe
Swelling	None	Mild	Moderate	Severe	Very severe
Difficulties in daily activities	None	Mild	Moderate	Severe	Very severe
Others, please specify:	None	Mild	Moderate	Severe	Very severe
(Include more than one symptom if applicable)					

### STEP 2

Instructions: To be filled in by a healthcare professional.

Please assess the overall patient-reported symptom burden in accordance with the instructions in the remarks section.

Overall patient-reported symptom burden (please choose one):

No symptoms / Mild symptoms / Moderate symptoms / Severe symptoms

### Remarks:

"No symptoms" indicates that patients report "none" for all patient-reported symptoms

"Mild symptoms" indicates that patients report "mild" for ≥1 patient-reported symptoms without any symptom scoring "moderate", "severe" or "very severe".

"Moderate symptoms" indicates that patients report "moderate" for ≥1 patient-reported symptoms without any scoring "severe" or "very severe"

"Severe symptoms" indicates that patients report "severe" and/or "very severe" for ≥1 patient-reported symptoms

### STEP 3

Instructions: To be filled in by a healthcare professional. Combining patient-reported symptoms and clinician assessments, the severity of acute radiation dermatitis is graded with the following scoring tool:

Grade	Description
0	No signs and symptoms of acute radiation dermatitis
1	Erythema, change in pigmentation or dry desquamation with no or mild patient-reported symptoms.
2	Erythema, change in pigmentation or dry desquamation with moderate or higher patient-reported symptoms, and clinical intervention is recommended.
3	Moist desquamation with clinical intervention recommended
3A	Moist desquamation that is confined to skin folds or involves ≤25% of the irradiated area
3B	Moist desquamation that is beyond the skin folds or involves >25% of the irradiated area
4	One of the following: spontaneous bleeding, ulceration, tissue necrosis or interruption of radiation therapy required because of acute radiation dermatitis

### Remarks:

"Clinical intervention": Unscheduled visit, medication prescription e.g. topical steroids, or wound dressings required for treatment of acute radiation dermatitis in addition to routine skincare, moisturisers or preventive measures.

Figures: Step 1-3 of revised acute radiation dermatitis scoring tool