

MANAGEMENT OF PSORIASIS VULGARIS



Ministry of Health Malaysia



Dermatological Society of Malaysia



Academy of Medicine Malaysia

CLINICAL ASSESSMENT

Clinical Practice Guidelines Management of Psoriasis Development Group

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LEARNING OBJECTIVES

To be aware of various techniques available for the assessment of psoriasis severity

GRADING PSORIASIS SEVERITY

- Various instruments are available to measure the severity of psoriasis.
- Body Surface Area (BSA) involvement is widely used in daily clinical practice but it has not been validated.
- Psoriasis Area and Severity Index (PASI) is the gold standard to assess the physical severity of plaque-type psoriasis because it is the most well validated tool with good internal consistency, good intraobserver variation and acceptable interobserver variation.

GRADING OF PSORIASIS SEVERITY

- Physician Global Assessment (PGA) is another validated tool to assess physical severity with good intraobserver and acceptable interobserver variation.

GRADING OF PSORIASIS SEVERITY

- PGA or PASI is a sufficient tool for assessing the physical severity in patients with moderate to severe psoriasis.

Psoriasis area and severity index (PASI)

- PASI is the most commonly used psoriasis assessment tool in clinical studies
 - PASI is a measure of overall psoriasis severity and coverage
 - The PASI is used to assess patients with psoriasis over time and to monitor their response to therapy
 - PASI measures
 - Body regions as a percentage of body surface area
 - Extent of body region affected
 - Severity of psoriatic changes

PASI scoring

- Skin sections
 - The body is divided into four sections: head (h), trunk (t), upper extremities (u), and lower extremities (l)
 - head (h) = 10% of total body surface area
 - upper extremities (u) = 20% of total body surface area
 - trunk (t) = 30% of total body surface area
 - lower extremities (l) = 40% of total body surface area
 - Each of these areas is scored by itself and then the four scores are combined
- For each of the four body areas (Ah, At, Au, Al), body surface area involvement (coverage) is estimated

Scoring Erythema, Induration, Scaling

- Severity is measured by 3 different parameters measured separately for each skin section on a scale of 0 to 4
 - Erythema (E): redness
 - Induration (I): thickness
 - Desquamation (S): scaliness

Scoring Erythema

PART 1: Erythema Grades

As a part of PASI calculation, each of the four body regions is given the erythema (redness) grade **(0-4)**.

SCORING: **0** - None **2** - Moderate **4** - Very Severe
 1 - Mild **3** - Severe

Examples of Erythema Grades:



Erythema = 0



Erythema = 1
(Light red)



Erythema = 2
(Red, but not deep red)



Erythema = 3
(Very red)



Erythema = 4
(Extremely red)

Scoring Erythema



Erythema = 1 (Light Red)



Erythema = 2 (Red, but not deep red)

Scoring Erythema



Erythema = 3 (Very red)

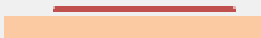


Erythema = 4 (Extremely / Dark red)

Scoring Induration

PART 2: Induration Grades

As a part of PASI calculation, each of the four body regions is given the induration grade (0-4).

	HEIGHT	SCORE	DESCRIPTION
	0 mm	0	None
	0.25 mm	1	Mild
	0.5 mm	2	Moderate
	1 mm	3	Severe
	1.25 mm	4	Very Severe

Scoring Induration



Induration = 1 (\pm 0,25 mm thick)



Induration = 2 (\pm 0,5 mm thick)

Scoring Induration



Induration = 3 (\pm 1 mm thick)



Induration = 4 (\pm 1,25 mm thick)

Scoring for Scales

PART 3: Scaling Grades

As a part of PASI calculation, each of the four body regions is given the scaling grade (0-4).

SCORING: **0** - None **2** - Moderate **4** - Very Severe
 1 - Mild **3** - Severe

Examples of Scaling Grades:



Scale = 0
(No scale)



Scale = 1
(Mainly fine scale,
some of lesion
covered)



Scale = 2
(Coarser, thin scale,
most of lesion
covered)



Scale = 3
(Coarse, thick scale,
most of lesion
covered, rough)



Scale = 4
(Very thick scale,
all of lesion covered,
very rough)

Scoring for Scales



Scaling = 1 (fine scales)



Scaling = 2 (coarse, thin scales)

Scoring for Scales



Scaling = 3 (coarse, thick scales)



Scaling = 4 (very thick and rough scales)

PASI Scoring: Body surface area

- BSA – the amount of affected skin is measured just in that part of the body and a score from 1 to 6 is assigned

	<1%	1-9%	10-29%	30-49%	50-69%	70-89%	90-100%
Score	0	1	2	3	4	5	6

- “Eyeball” assessment of BSA
 - Useful when larger areas are involved
 - More frequently employed by experienced evaluators
- Palm assessment of BSA
 - Useful for smaller areas of involvement or widely spaced areas
 - More frequently employed by new evaluators

Psoriasis area and severity index (PASI)

Score	0	1	2	3	4
Erythema Induration Scaling	None	Mild	Moderate	Severe	Very Severe

Area Score

Score	0	1	2	3	4	5	6
Area	0	1% - 9%	10% - 29%	30% - 49%	50% - 69%	70% - 89%	90% - 100%

Symptom Score	Head (H)	Trunk (T)	Upper Limbs (UL)	Lower Limbs (LL)
Erythema (E)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Induration (I)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Scaling (S)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Sum = E + I + S	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Area Score	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Sum X Area =	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>

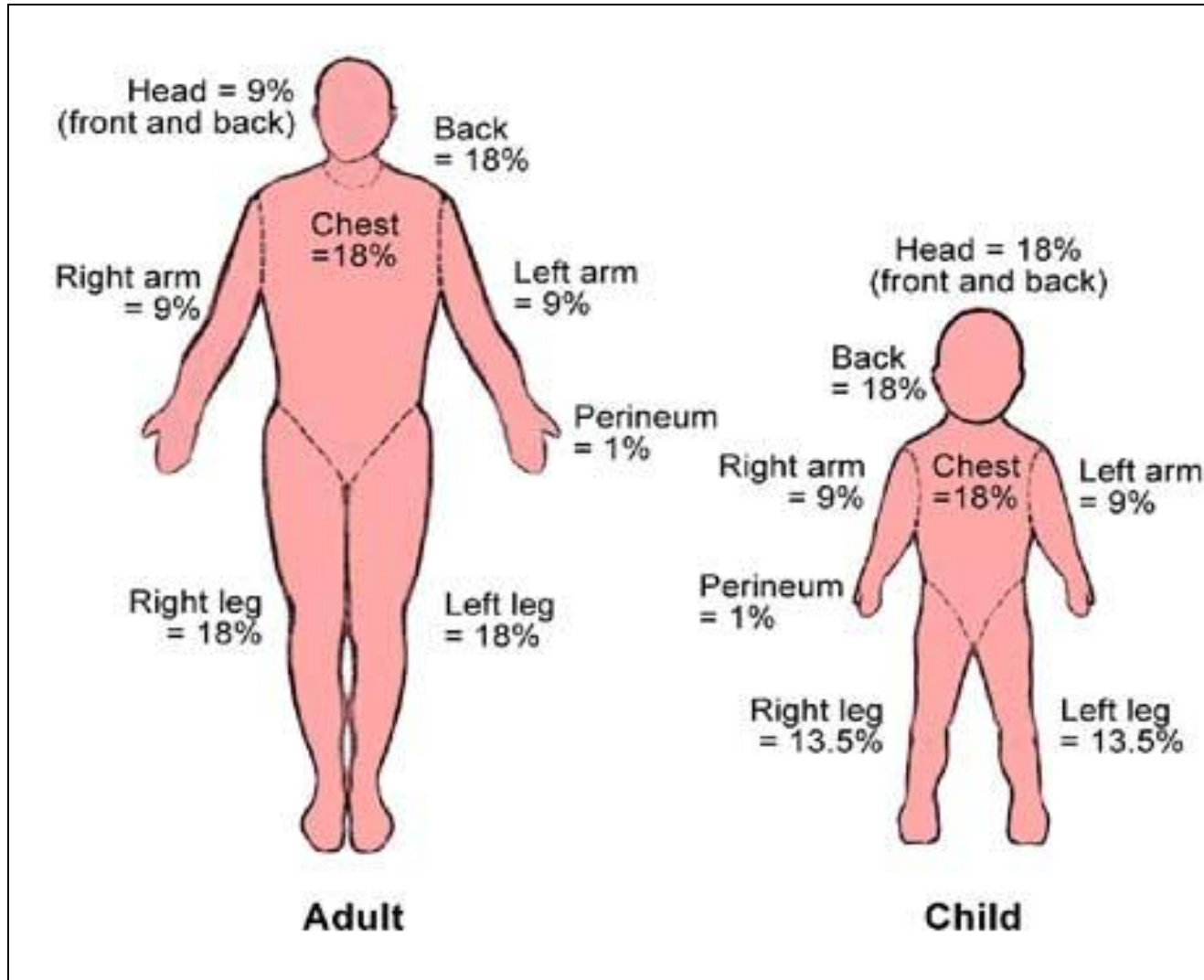
X 0.1 =
X 0.3 =
X 0.2 =
X 0.4 =

.
.
.
 + .

PASI = SUM .

- PASI score is calculated:
 - $+ 0.1 (E_h + I_h + S_h)$
Ah
 - $+ 0.3 (E_t + I_t + S_t)$ At
 - $+ 0.2 (E_u + I_u + S_u)$
Au
 - $+ 0.4 (E_l + I_l + S_l)$ Al

Body surface area: Rule of Nine



Body surface area: palm method

- Area of palm plus 5 fingers $\approx 1\%$ of total BSA
 - Head and Neck = 10% (10 palms)
 - Upper extremities = 20% (20 palms)
 - Trunk (axillae and groin) = 30% (30 palms)
 - Lower extremities (buttocks) = 40% (40 palms)
 - Total BSA = 100% (100 palms)



PHYSICAL GLOBAL ASSESSMENT

- A static and a dynamic scale can both be used.
- Usually used as a 7-point score
- Static scale: 0 = clear; scores 1 to 6 = increasing severity

PSORIASIS PHYSICIAN GLOBAL ASSESSMENT (PGA)

Score	Definition	Morphological Description
0=Clear	Clear, except for residual discoloration	<ul style="list-style-type: none"> • 0 (Induration)=no evidence of plaque elevation • 0 (erythema)=no evidence of erythema, hyperpigmentation may be present • 0 (scaling)=no evidence of scaling
1 = Minimal disease	Majority of lesions have individual scores for induration, erythema and scaling (IES) that average 1	<ul style="list-style-type: none"> • 1 (Induration)=minimal plaque elevation, ~ 0.5 mm • 1 (erythema)=faint erythema • 1 (scaling)= minimal; occasional fine scale over less than 5% of the lesion
2 = Mild disease	Majority of lesions have individual scores for induration, erythema and scaling (IES) that average 2	<ul style="list-style-type: none"> • 2 (Induration)=mild plaque elevation, ~1 mm • 2 (erythema)=light red coloration • 2 (scaling)=mild, fine scale predominates
3 = Moderate disease	Majority of lesions have individual scores for induration, erythema and scaling (IES) that average 3	<ul style="list-style-type: none"> • 3 (Induration)=moderate plaque elevation, ~1.5 mm • 3 (erythema)=moderate red coloration • 3 (scaling)=moderate; coarse scale predominates
4 = Severe disease	Majority of lesions have individual scores for induration, erythema and scaling (IES) that average 4	<ul style="list-style-type: none"> • 4 (Induration)=marked plaque elevation, ~2 mm • 4 (erythema)=bright red coloration • 4 (scaling)=marked; thick, non-tenacious scale predominates
5 = Very severe disease	Majority of lesions have individual scores for induration, erythema and scaling (IES) that average 5	<ul style="list-style-type: none"> • 5 (Induration)=severe plaque elevation, ~2.5 mm or more • 5 (erythema)=dusky to deep red coloration • 5 (scaling)=very thick tenacious scale predominates

PHYSICAL GLOBAL ASSESSMENT

Grade		Description	Response [*]
0	Completely clear	No evidence of disease; 100% improvement	CR
1	Almost clear	Very significant clearance ($\geq 90\%$ to $< 100\%$); only traces of disease remain	PR
2	Marked improvement	Significant improvement ($\geq 75\%$ to $< 90\%$); some evidence of disease remains	PR
3	Moderate improvement	Intermediate between slight and marked improvement; ($\geq 50\%$ to $< 75\%$)	PR
4	Slight improvement	Some improvement ($\geq 25\%$ to $< 50\%$); significant evidence of disease remains	SD
5	No change	Disease has not changed from baseline condition ($\pm < 25\%$)	SD
6	Worse	Disease is worse than at baseline evaluation by $\geq 25\%$ or more	PD

* Confirmation over at least 4 study weeks required except for a last assessment on study if progressive disease; CR = complete response; PR = partial response; SD = stable disease; PD = progressive disease

GRADING PSORIASIS SEVERITY

- PASI, PGA and BSA do not reflect the psychosocial impact of mild psoriasis located on critical areas such as face, hands and genitalia.
- Short Form 36 (SF36), DLQI and Psoriasis Disability Index (PDI) are commonly used to measure the impact of psoriasis on patient's quality of life (QoL).
- DLQI is validated, concise and simple to use in clinical practice.

Dermatology Life Quality Index (DLQI)

- The Dermatology Life Quality Index (DLQI) consists of 10 questions covering 6 aspects of QoL:
 - Symptoms & feelings
 - Daily activities
 - Leisure
 - Work & school
 - Personal relationships
 - Bother with psoriasis treatment

Dermatology Life Quality Index (DLQI)

Hospital No:

Date:

Score:

Name:

Diagnosis:

Address:

The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please tick one box for each question.

1.	Over the last week, how itchy, sore, painful or stinging has your skin been?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
2.	Over the last week, how embarrassed or self conscious have you been because of your skin?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
3.	Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Not relevant <input type="checkbox"/>
4.	Over the last week, how much has your skin influenced the clothes you wear?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Not relevant <input type="checkbox"/>
5.	Over the last week, how much has your skin affected any social or leisure activities?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Not relevant <input type="checkbox"/>

Dermatology Life Quality Index (DLQI)

6.	Over the last week, how much has your skin made it difficult for you to do any sport?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Not relevant
7.	Over the last week, has your skin prevented you from working or studying?	yes no	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Not relevant
	If "No", over the last week how much has your skin been a problem at work or studying?	A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
8.	Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Not relevant
9.	Over the last week, how much has your skin caused any sexual difficulties?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Not relevant
10.	Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time?	Very much A lot A little Not at all	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Not relevant

Dermatology Life Quality Index (DLQI)

- The DLQI is calculated by summing the score of each question
- Score ranges from a minimum of 0 to a maximum of 30
 - Lower scores correspond to better quality of life
 - 5-point improvement in DLQI is considered to be clinically important
- DLQI
 - 0 to 1 no effect at all.
 - 2-5 small effect
 - 6 to 10 moderate effect
 - 11-20 very large effect
 - 21 to 30 extremely large effect

Malaysian CPG on the management of Psoriasis vulgaris

Assessment of psoriasis severity

Recommendation

- **BSA or PASI**
 - physical severity of psoriasis
- **DLQI**
 - impact of psoriasis on the quality of life

Table 2: Grading of Psoriasis Severity

Grade of severity	Measurement tools	Interpretation
Mild	<ul style="list-style-type: none">• BSA <10%• PASI ≤10• DLQI ≤10	Disease with a minimal impact on the patient's QoL and patient can achieve acceptable symptom control by standard topical therapy
Moderate	<ul style="list-style-type: none">• BSA > 10% to 30%• PASI >10 to 20• DLQI > 6 to 20	Disease that cannot be, or would not be expected to be controlled to an acceptable degree by standard topical therapy, and/or disease that significantly affects the patient's QoL
Severe	<ul style="list-style-type: none">• BSA > 30%• PASI > 20• DLQI > 20	Disease that cannot be, or would not be expected to be controlled by topical therapy and that adversely affect patient's QoL (this include erythrodermic psoriasis, pustular psoriasis and psoriatic arthritis)

Malaysian CPG on the management of Psoriasis vulgaris

Definition of psoriasis severity

	Definition of severity
Mild psoriasis	BSA \leq 10% or PASI \leq 10 or DLQI \leq 10
Moderate psoriasis	BSA >10% to 30% or PASI >10 to 20 or DLQI >10 to 20
Severe psoriasis	BSA > 30% or PASI > 20 or DLQI >20