Photographic Wound Assessment Tool
PWAT – Revised

Item	Assessment			Score
1. Size	0 = wound is closed (skin intact) or nearly closed (<0.3cm^2) 1 = 0.5 – 2.0 cm^2 2 = 2.0 - 10.0 cm^2 3 = 10.0 – 20.0 cm^2 4 > 20.0 cm^2			
2. Depth	0. wound is healed (skin intact) or nearly closed (<0.3cm^2) 1. full thickness 2. unable to judge because majority of wound base is covered by yellow/black eschar 3. full thickness involving underlying tissue layers 4. tendon, joint capsule, bone, visible/ present in wound base			
3. Necrotic Tissue Type	0 = None visible or wound is closed (skin intact) or nearly closed (<0. 3cm^2) 1 = majority of necrotic tissue is thin White/grey or yellow slough 2 = majority of necrotic tissue is thick, adherent white yellow slough or fibrin 3 – majority of necrotic tissue is white/grey devitalized tissue or eschar 4 = majority of necrotic tissue is hard grey to black eschar			
4. Total Amount of Necrotic Tissue	0 = None visible in open wound or wound is closed (skin intact) or nearly closed(0.3cm^2) 1 = < 25% of wound bed covered 2 = 25% to 50% of wound covered 3 = > 50% and < 75% of wound covered 4 = 75% to 100% of wound covered			
5. Granulation Tissue type	0 = Wound is closed (skin intact) or nearly closed (<0.3cm^2) 1 = majority (>50%) of granulation tissue is healthy looking (even bright red appearance) 2 = majority of granulation tissue is unhealthy (eg. pale, dull, dusky, hypergranulation) 3 = majority of granulation tissue is damaged, friable, degrading 4 = there is no granulation tissue present in the base of the open wound (all necrotic)			
6. Total Amount of Granulation Tissue	0 = Wound is closed (skin intact) or nearly closed (<0.3cm^2) 1 =75% to 100% of open wound is covered with granulation tissue 2 = >50% and <75% of open wound is covered with granulation tissue 3 = 25% to 50% of wound bed is covered with granulation tissue 4 = <25% of wound bed is covered with granulation tissue			
7. Edges (directly touching and within 0.5cm of wound edge)	0 = Wound is closed (skin intact) or nearly closed (<0.3cm^2) or edges are indistinct, diffuse, not clearly visible because of re-epithelialization 1 = majority (>50%) of edges are attached with an advancing border of epithelium 2 = majority of edges are attached even with wound base (not advancing) 3 = majority of edges are unattached and/or undermined 4 = majority of edges are rolled, thickened or fibrotic (do not include callus formation)			
8. Periulcer Skin Viability (consider skin visible in photo or within 10 cm of wound edge)	Number of factors affected 0 = None 1 = One only 2 = Two or Three 3 = Four or Five 4 = six or more	- callus - dermatitis - maceration - desiccation or cracking - bright red, erythemic	- edema - excoriation - skin tearing/irritation r/t wound dressing or tape - hypo/hyper pigmentation - other: _____	
TOTAL SCORE				

Instructions for Scoring the Photographic Wound Assessment Tool (PWAT)

The PWAT is best used to assess, but not limited to, the following types of wounds:

- Chronic, full thickness diabetic foot ulcers, venous leg ulcers, and pressure ulcers where at least 50% of the wound base can be visualized (not recommended for tunneling wounds with small openings or those covered by thick eschar).
- Wounds with distinct wound edges
- Wounds that can be visualized all at once - not circumferential
- Wounds that have been cleansed and debrided (if appropriate), removing loosely adherent debris and/or dressing residue. If debris still present after wound cleansing, it is considered part of the wound.
- This assessment tool can be used on wound photographs or at the bedside while directly visualizing the wound.

PWAT Scoring Instructions:

Assess the wound photograph and rate each PWAT domain according to the response that best describes observed wound findings. When more than one characteristic is evident, rate according to the majority or predominate feature that is visible in the photograph. Sub-scores are added together to obtain the total score. Total scores range from 0 to 32 where a decreasing total score indicates healing.

1. Size:

Place a disposable ruler adjacent to, but not covering, the wound edge, and perpendicular to the camera lens. Use the calibrations on the ruler included within the photograph to determine the longest and widest dimensions of the wound. Width is located perpendicular to length avoiding diagonals. Multiply length by width to determine total surface area in cm^2. A wound that had closed with skin intact is scored as 0.

2. Depth:

Describe the extent of tissue layers involved in the wound. Full thickness wounds extend beyond the epidermis and the dermis into or through subcutaneous tissue and are categorized according to the depth of involvement of subcutaneous tissue. Wounds with distinct wound edges are considered full thickness and are scored as a 1. When deeper underlying layers such as subcutaneous fat, muscle, and other soft tissue layers are involved the score is 3. Evidence of tendon, joint capsule or bone indicates deeper tissue involvement and changes the score to 4. Presence of yellow / black necrotic tissue may obscure the majority of the wound base and the depth of tissue injury resulting in a score of 2.

3. Necrotic Tissue Type:

Score the majority of necrotic tissue visible in the photograph. Slough can be yellow, white/yellow, thin, mucinous or fibrinous material scattered throughout the wound bed. Granulation tissue can be visible through thin white/yellow slough. Necrotic tissue may also be thick and adherent impairing visualisation of granulation or healthy tissue. Necrotic tissue may appear as white/grey soft, boggy, or devitalised tissue. Hard grey or black eschar is given a score of 4.

4. Total Amount of Necrotic Tissue:

Determine the total percentage of all types of necrotic tissue visible on the wound bed by picturing the wound as a circle and visually dividing it into four equal quadrants to determine percentage. Thorough wound cleansing and/or debridement is essential to remove loose slough, debris and residual dressing products prior to assessing necrotic tissue type and amount**. Asterisks refers to comment below.

5. Granulation Tissue Type:
Select the majority of granulation tissue type visible in the photograph. Granulation tissue is composed of small blood vessels and connective tissue that grow to fill the wound defect in full thickness wounds. Healthy granulation tissue is bright, beefy pink/red, firm tissue, with a shiny, bumpy, granular appearance. Unhealthy granulation tissue may appear pale, dull, dusky or hypergranulated. Hypergranulation tissue is exuberant bright red tissue extending above the edge of the wound. Granulation tissue that is degrading may appear as bridges, be friable and bleed easily or appear pitted rather than granular.

6. Total Amount of Granulation Tissue:
Determine the percentage of the wound that is covered by granulation tissue by picturing the wound as a circle and visually dividing it into four equal quadrants. This percentage should be the reciprocal value to domain #4 (total amount of necrotic tissue) and add to a total of 100%.

7. Edges:
Observe the wound edges that are directly touching and within 0.5cm of the wound edge. Epidermal tissue appears as pale pink, silvery/grey coloured tissue that extends into the wound from the wound edge. Edges that are diffuse, indistinct, or are not clearly visible occur as the wound surface is covered with new epithelial tissue and closes the wound. Undermining may be displayed in the photograph by the insertion of a cotton applicator into the detached area. Wound edges may be attached to the wound base or have undermining and may appear thick, hard and fibrotic with scar tissue, or rolled when epithelium rolls under the wound edge all which impair wound healing and are scored as a 4.

8. Periulcer Skin Viability:
Assess skin visible in the photograph or within 10cm of the wound edge. Select all visible items. Count the number of items identified to determine the appropriate score.

- Callus: thick hard dry skin often located over an area of friction and/or pressure
- Dermatitis: red, itchy, scaly, and flaky skin
- Maceration: white, wet, boggy, opaque looking skin resulting from excessive moisture
- Desiccation or cracking: dry skin with visible cracks and fissures
- Bright red erythemic skin: redness of the skin resulting from infection, or an allergic reaction.
- Edema: fluid accumulation in the intercellular spaces around the wound. Difficult to visualize in a photograph. Non-pitting edema may appear as skin that is shiny and taut. Pitting edema may be identified in the photograph if a finger was pressed into the periwound skin resulting in a visible indentation or an indentation from a dressing.
- Excoriation: Abrasions, scratches, or weeping dermatitis
- Skin tearing / irritation: May be related to removal of adhesive products or tapes or product allergy. Look for product outline if allergy is suspected.
- Hypo/hyper pigmentation: Hypopigmentation shows lack of colour in the skin and may result from scar tissue from previous skin injury. Hyperpigmentation may result from leakage of hemosiderin into the tissues perhaps from venous stasis or previous injury. Other findings can be added to the list.

Specific Instructions for wounds with thin layer of necrotic tissue/slough

** Should you encounter a wound that is covered by thin, white/yellow layer of slough, the recommended score for necrotic tissue type/amount and granulation tissue type/amount is:

3. Necrotic Tissue Type	0 = None visible or wound is closed (skin intact) or nearly closed (<0. 3cm^2) 1 = majority of necrotic tissue is thin White/grey or yellow slough 2 = majority of necrotic tissue is thick, adherent white yellow slough or fibrin 3 – majority of necrotic tissue is white/grey devitalized tissue or eschar 4 = majority of necrotic tissue is hard grey to black eschar	1
4. Total Amount of Necrotic Tissue	0 = None visible in open wound or wound is closed (skin intact) or nearly closed(0.3cm^2) 1 = < 25% of wound bed covered 2 = 25% to 50% of wound covered 3 = > 50% and < 75% of wound covered 4 = 75% to 100% of wound covered	4
5. Granulation Tissue type	0 = Wound is closed (skin intact) or very close to closed (<0.3cm^2) 1 = majority (>50%) of granulation tissue is healthy looking (even bright red appearance) 2 = majority of granulation tissue is unhealthy (eg. pale, dull, dusky, hypergranulation) 3 =granulation tissue is damaged, friable, degrading 4 = there is no granulation tissue present in the base of the open wound (all necrotic)	4
6. Total Amount of Granulation Tissue	0 = Wound is closed (skin intact) or very close to closed (<0.3cm^2) 1 =75% to 100% of open wound is covered with granulation tissue 2 = >50% and <75% of open wound is covered with granulation tissue 3 = 25% to 50% of wound bed is covered with granulation tissue 4 = <25% of wound bed is covered with granulation tissue	4