Pressure Ulcer Staging

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Presented at the IRF Provider Training
Baltimore, Maryland May 12 , 2014

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Objectives- Participants will:

- **Differentiate** pressure ulcers from other skin injuries
- Describe pressure ulcer **stages**
- **Compare** CMS and NPUAP staging definitions

2

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CMS Pressure Ulcer Definition

"A **pressure ulcer** is a **localized injury** to the skin and/or underlying tissue ***usually*** over a **bony prominence**, as a result of pressure, or pressure in combination with shear and/or friction."

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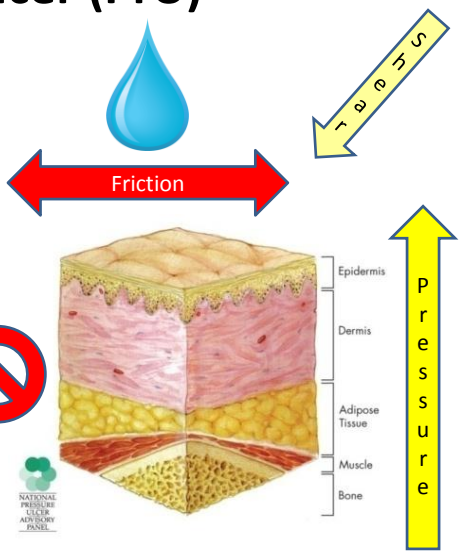
Determine that the skin lesion is a pressure ulcer (PrU)

- **Primarily** related to pressure
- If shear present, lower pressure may cause PrU
- Moisture and friction are most likely associated with other conditions



Reference: Sibbald, R.G., Krasner, D.L. & Woo, K.Y. ,Advances in Skin and Wound Care 2011., 24(12), p.571-80

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Get the skin injury etiology correct!

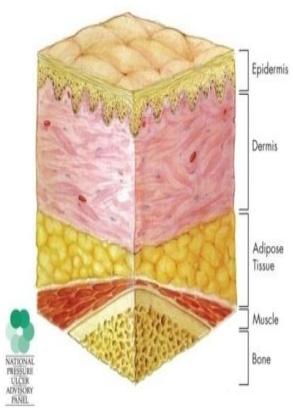
Superficial skin changes and deep tissue framework

Superficial

- Stage 1 or 2 pressure ulcers
- Skin tears
- Moisture associated skin damage (MASD) of the incontinence-associated dermatitis (IAD) type
- Contact dermatitis
- Friction blisters

Deep

- Stage 3 or 4 pressure ulcers
- Unstageable including slough and/or eschar, deep tissue injury pressure ulcers



Modified from Sibbald, R.G., Krasner, D.L. & Woo, K.Y. ,Advances in Skin and Wound Care 2011., 24(12), p.571-80

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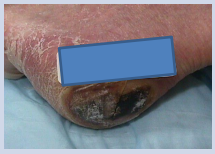
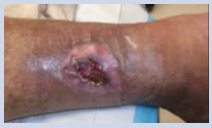
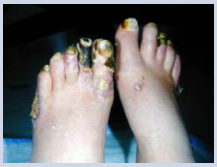
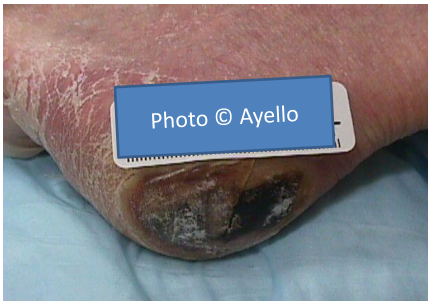
Determine the Wound Etiology

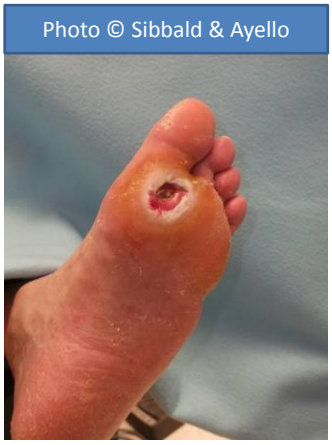
Type of Ulcer	Pressure	Venous	Arterial
Primary Cause	• Pressure • Shear will lower threshold for ulcer	• Venous disease • Trauma or infection can precipitate ulcer	• Inadequate arterial blood flow (ischemia) • Trauma, infection can precipitate ulcer
Typical Location	• Bony prominences • Often oval in shape	• Lower leg- around malleolar • Lower third of calf (gaitor) serpiginous margin	• Distal (gangrene) toes • May localize proximal (punched out, fibrous base) trauma/infection
Clinical example			

Determine the Wound Etiology

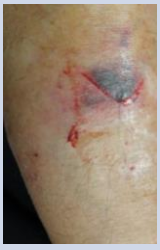
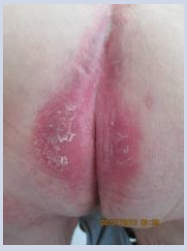
Pressure Ulcer



Diabetic Neuropathic Foot Ulcer with underlying osteomyelitis



Determine the Wound Etiology

Type of Wound	Pressure Ulcer	Skin Tears	MASD
Primary Cause	Pressure with or without shear	Trauma or friction	Moisture and friction
Typical Location	Bony prominences	Arms & legs. Areas underneath tape	Buttocks, perineal area, skin folds
Clinical example			

Skin Tears

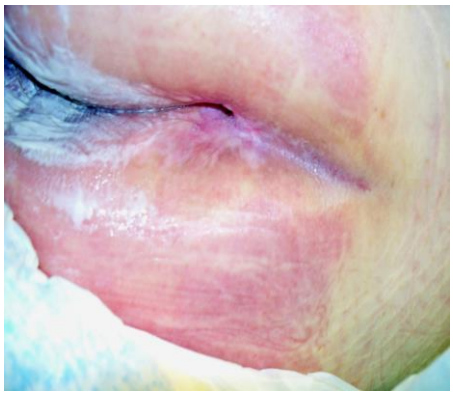
Do not use the pressure ulcer staging system for Skin tears

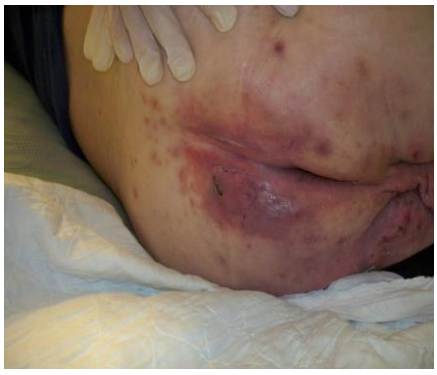
New information and resources from the International Skin Tear Advisory Panel (ISTAP)

- LeBlanc K, Baranoski S, Holloway S, Langemo D. Validation of a New Classification System for Skin Tears. Advances Skin Wound Care 2013;26:263-65.
- Leblanc, K, Baranoski S, Christensen D, et al. International Skin Tear Advisory Panel: A toll kit to aid in the prevention, assessment, and treatment of skin tears using a simplified classification system. Advances in Skin and Wound Care. 2013;26(10):459-476.

Free download
www.woundcarejournal.com

Moisture Associated Skin Damage (MASD)





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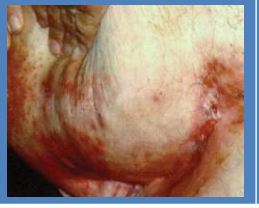
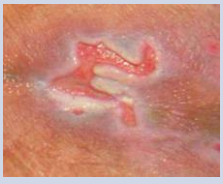
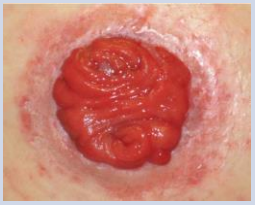
Moisture Associated Skin Damage (MASD)

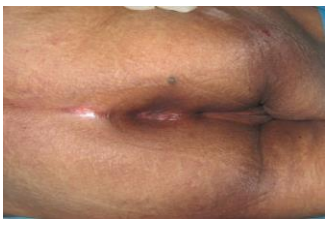
Inflammation and erosion of the skin caused by **prolonged exposure** to various sources of moisture, including urine or stool, perspiration, wound exudate, mucus, or saliva.

Intertriginous Dermatitis 	**Incontinence Associated skin Dermatitis (IAD)** 
Periwound moisture associated Dermatitis (maceration) 	Peristomal moisture associated Dermatitis 

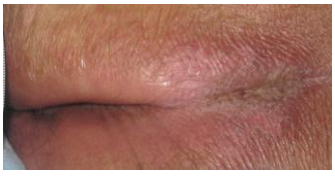
SKIN ASSESSMENT SCALE for Brown Pigmented Skin©

Available at www.woundpedia.com

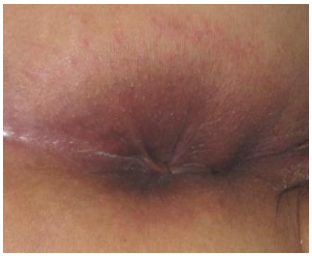
NO REDNESS
Score = 0



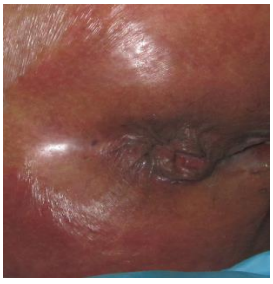
Mild Redness
Score = 1



Moderate Redness
Score = 2



Severe Redness
Score = 3



© Ayello & Sibbald 2010

Reference: Ayello et al. WCET Journal. 2014;34(2):18-26

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Differentiating Moisture Damage from Pressure

Characteristics	MASD  © Sibbald	Pressure Ulcer  ©Ayello
Location	Larger skin area in contact with moisture	Usually localized over bony prominence
Edges	Irregular	Distinct
Color	Red, usually blanchable erythema	Varies, Non blanchable erythema
Depth	Superficial	Superficial to full thickness
Necrosis	None	Yes

Gray, M. et al. Moisture-Associated Skin Damage- Overview and Pathophysiology. *JWOCN* 2011; 38(3):233-241
Black J et al. MASD Part 2: Incontinence-Associated Dermatitis and Intertriginous Dermatitis. *JWCON* 2011;38(4):359-370
Colwell J. et al. MASD Part 3: Peristomal moisture-Associated dermatitis and periwound moisture-associated dermatitis. *JWOCN* 2011 38(5):541-553.
***Zulkowski, K**. Perineal dermatitis versus pressure ulcer: Distinguishing characteristics. ASWC 2008 21(8):382-8*
***Wolfman,** A. Preventing incontinence-associated dermatitis and early stage pressure injury. WCET 2010 30(1):19-24.*

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© Ayello & Sibbald

Objectives- Participants will:

- **Differentiate** pressure ulcers from other skin injuries
- Describe pressure ulcer **stages**
- **Compare** CMS and NPUAP staging definitions

Determine that the skin lesion is a pressure ulcer….

- ✓ **History**
- ✓ **Primarily** related to pressure
- ✓ **Rule out potential contributing factors and conditions**
  - ✓ **Moisture**
  - ✓ **Vascular-Arterial, Venous**
  - ✓ **Friction**
  - ✓ **Trauma**

CMS determination of Pressure Ulcer

If a skin lesion being assessed is primarily related to **pressure,** and **other conditions have been ruled out,** then it is a **pressure ulcer**

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Determine that the skin lesion is a pressure ulcer….

Classify using the staging system

- ✓ **History**
- ✓ **Primarily** related to pressure
- ✓ **Rule out potential contributing factors and conditions**
  - ✓ **Moisture**
  - ✓ **Vascular-Arterial, Venous**
  - ✓ **Friction**
  - ✓ **Trauma**

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US Prevalence Data- Rehabilitation

Year	2006	2007	2008	2009
Number	493	751	707	1,588
Overall prevalence	16.3%	18.8%	19.4%	19.0%
FA prevalence	4.0%	4.1%	6.6%	4.7%
Prevalence excluding Stage 1	10.4%	13.0%	14.7%	14.6%
FA prevalence excluding stage 1	**2.3%**	**2.1%**	**4.7%**	**3.1%**

vanGilder C, Amlung S, Harrison P, Meyer S. Results of the 2008-2009 International Pressure Ulcer Prevalence™ Survey and a 3-year, acute care, unit-specific analysis. *Ostomy Wound Management, 2009;55(11):39-45*

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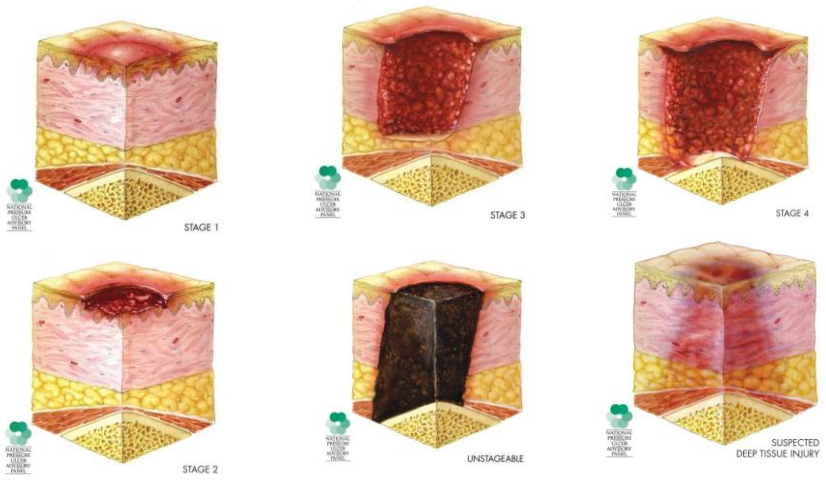
NPUAP Pressure Ulcer – 6 Stages



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Pressure Ulcer Definitions

CMS has **adapted** but **not adopted** the National Pressure Ulcer Advisory Panel (NPUAP) 2007 pressure ulcer stages

Stage 1

Stage 2

Stage 3

Stage 4

Unstageable (3 categories)

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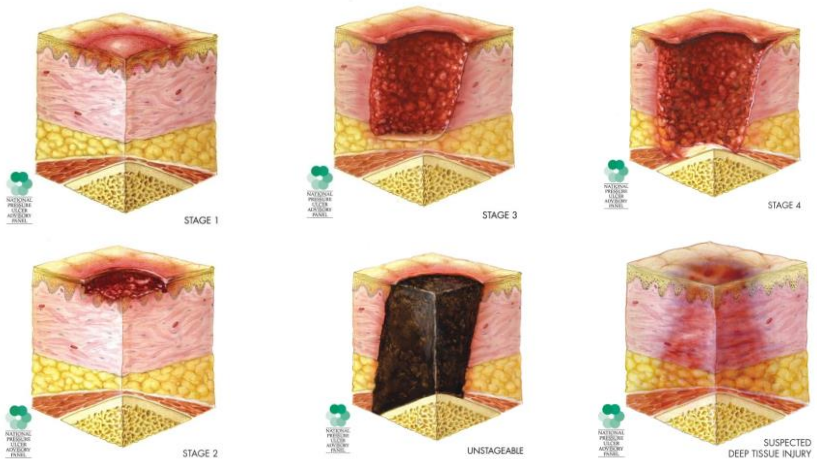
Pressure Ulcer Staging



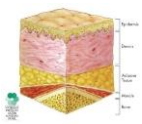
NPUAP EPUAP International Pressure Ulcer Guideline 2009
Confirm the reliability of classifications among the professionals responsible for classifying pressure ulcers.
(Strength of Evidence =B)

Pressure Ulcer Staging Quiz
True or False

Statement	True	False
An ulcer on the mucosa from a medical device should be staged		
Pressure ulcer staging is based on the depth in cm		
As the ulcer heals, "reverse or back" stage the ulcer		
Staging of pressure ulcers requires clinical skills including minimally observation and palpation		
CMS definition of stage 2 pressure ulcer differs from NPUAP		

Pressure ulcer staging is based on:

- History
- Actual assessment- **visual observation** and **palpation**
- **Full body head to toe skin assessment,** especially areas over on bony prominences that are pressure-bearing areas (think patient position also)
- Clean the ulcer before staging
- Deepest anatomic type of soft tissue damaged- Tissue **type**, ***not depth in centimeters***



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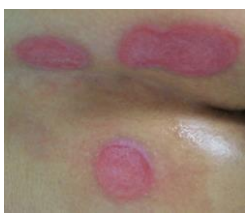
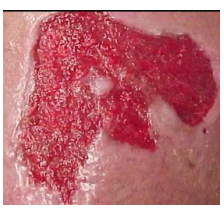
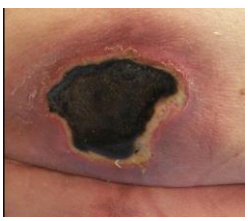
Tissue Types



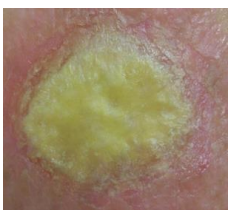
New Epithelial Tissue



Granulation



Eschar



Slough

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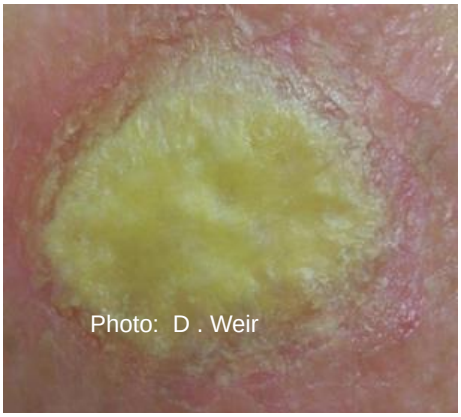
Photos: D . Weir

Slough Tissue



Non-viable yellow, tan, gray, green or brown tissues, **usually moist**, can be soft, stringy, and mucinous in texture.

Slough may be adherent to the base of the wound or present in clumps throughout the wound bed.

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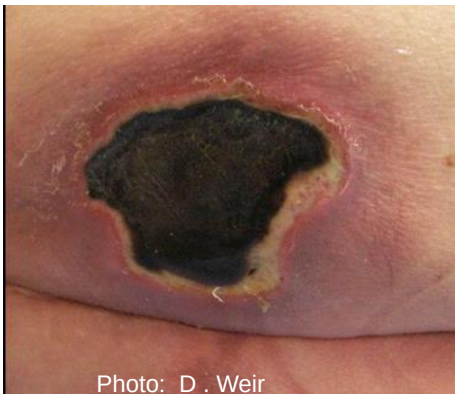
Eschar Tissue



Dead or **devitalized tissue** that is **hard** or **soft** in texture, usually black, brown, or tan in color, and may appear scab-like.

Eschar tissue is **usually firmly adherent** to the base of and wound and often the sides/edges of the wound.

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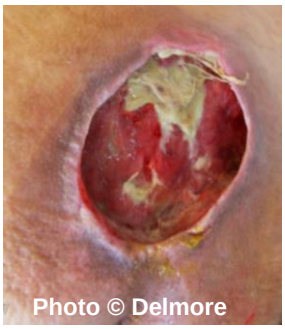
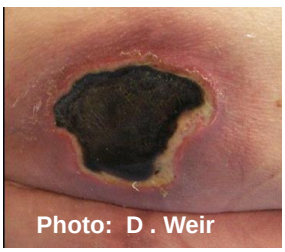
How much of the wound bed covered makes it unstageable?





Is the pressure ulcer:

- Only **partially covered**, and you can visualize or palpate to identify the anatomical depth of tissue type damaged
- Then **numerically stage** the ulcer rather than classifying as unstageable.

If the pressure ulcer:

- Wound bed is completely covered with eschar, then classify as **unstageable**

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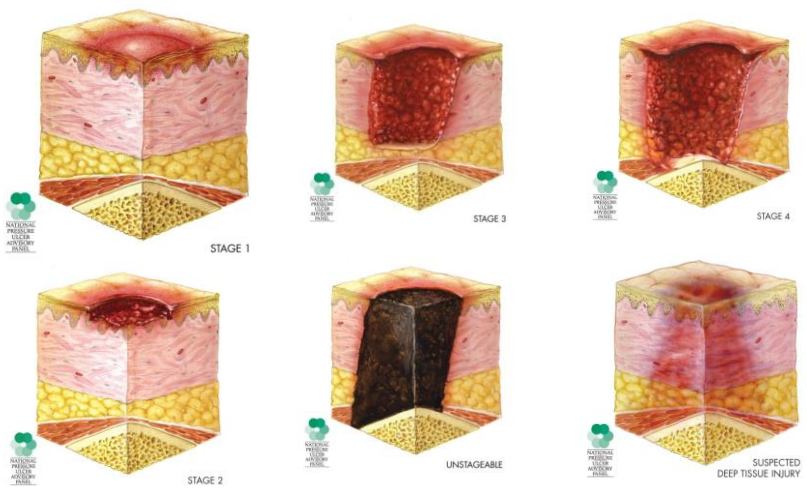
NPUAP Pressure Ulcer Staging



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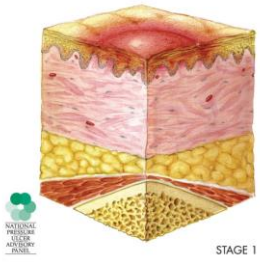
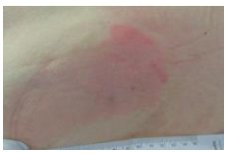
NPUAP Category/Stage I Pressure Ulcer

Definition

- **Intact skin** with **non-blanchable erythema** of localized area, usually ov a bony prominence.
- **Discoloration** of the skin, **warmth, edema, hardness**, or **pain** may be present
- **Darkly pigmented skin** may not have visible blanching.





Description

- The area may be more **painful, firmer or softer, or warmer or cooler** than adjacent tissue.
- Category/Stage I may be difficult to detect in individuals with dark skin tones
- This may indicate an at-risk individual.

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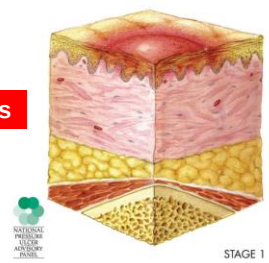
CMS Stage 1 Pressure Ulcer Definition

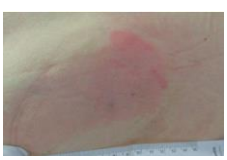
- **Intact skin** with **non-blanchable** of a localized area, usually over a bony prominence.
- **Discoloration** of the skin, **warmth, edema, hardness**, or **pain** may be present

redness



- **Darkly pigmented skin** may not have visible blanching.

In dark skin tones it may appear with persistent blue or purple hues



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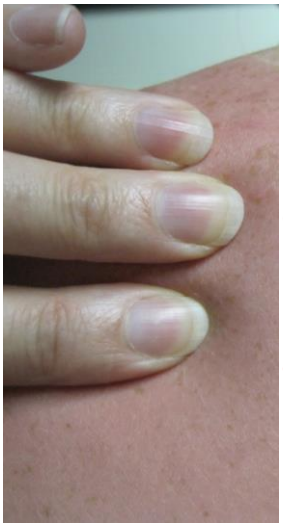
Blanchable versus **Non-blanchable**



- Check ability for skin to blanch by firmly pressing a finger into the redden tissue and then releasing it.

Blanchable (not pressure ulcer)

- Skin color pales or changes color

Non-blanchable (pressure ulcer)

- If **no loss** of skin color or pale) or pressure induced pallor at the site, it is non-blanchable, a pressure ulcer

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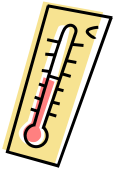
Key points for detecting stage 1 pressure ulcers

- Need **adequate light** to assess the skin
- Do not rely on only one descriptor to distinguish between stage 1 or DTI.

- Besides, color changes, assess **skin temperature**



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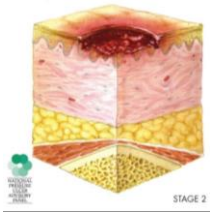
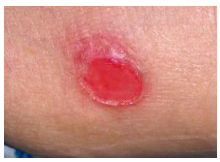
NPUAP Category/Stage II

Definition

- **Partial thickness** loss of dermis presenting as a **shallow** open ulcer with a red/pink wound bed, **without slough**.
- It may also present as an intact or open/ruptured ***serum-filled*** or **sero-sanguineous filled blister**.





Description

- Presents as a shiny or dry shallow ulcer **without slough** or bruising.*
- This category/stage should not be used to describe skin tears, tape burns, incontinence-associated dermatitis, maceration or excoriation.

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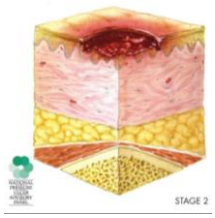
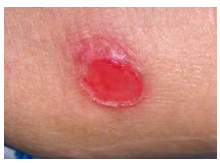
CMS Category/Stage 2

Definition

- **Partial thickness** loss of dermis presenting as a **shallow** open ulcer with a red/pink wound bed, **without slough**.
- May also present as **intact or open/ruptured blister**.





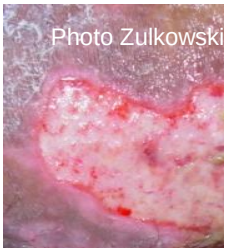
Coding Tips

- Presents as a shiny or dry shallow ulcer **without slough** or bruising.*
- Do NOT code skin tears, tape burns, moisture associated dermatitis, maceration or excoriation.

36

Detecting **Stage 2** Pressure Ulcer

- Inspect skin for shallow wounds or shiny areas of skin loss
- Do **not** include skin tears, erosion from urine or feces
- Do not include wounds covered with **slough**



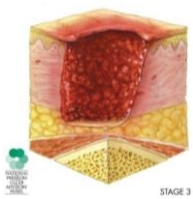
Examine the area surrounding the **blister** for signs **of tissue damage** (color change, tenderness, bogginess, firmness, warmth or coolness.)

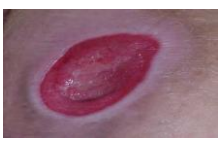
These characteristics suggest a suspected deep tissue injury rather than a stage 2 pressure ulcer.

37

NPUAP Category/Stage III Definition

- **Full thickness** tissue loss.
- **Subcutaneous fat** may be visible but bone, tendon or muscle are ***not*** exposed.
- Some **slough** may be present but does not obscure the depth of tissue loss.
- It *may* include undermining and tunneling.





Coding Tips

- The depth of a category/stage III pressure ulcer varies by anatomical location.
- The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and category/stage III ulcers can be shallow.
- In contrast, areas of significant adiposity can develop extremely deep category/stage III pressure ulcers.
- Bone / tendon is not visible or directly palpable.

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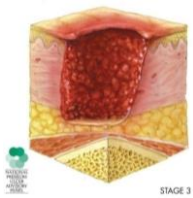
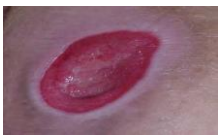
CMS Category/Stage 3 Definition

- **Full thickness** tissue loss.
- **Subcutaneous fat** may be visible but bone, tendon or muscle are ***not*** exposed.
- **Slough** may be present but does not obscure the depth of tissue loss.
- *May* include undermining and tunneling.





Coding Tips

- The depth of a stage 3 pressure ulcer varies by anatomical location.
- Stage 3 pressure ulcers can be shallow, particularly on areas that do not have subcutaneous tissue, such as the bridge of the nose, ear, occiput and malleolus.
- In contrast, areas of significant adiposity can develop extremely deep stage 3 pressure ulcers.
- Bone / tendon/muscle is not visible or directly palpable in a stage 3 pressure ulcer

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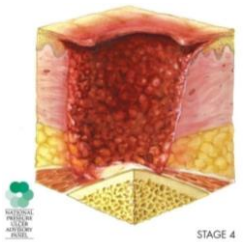
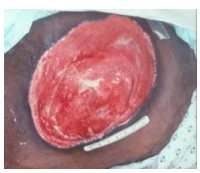
NPUAP Category/Stage IV Definition

- Full thickness tissue loss **with exposed bone, tendon or muscle**.
- **Slough or eschar may be present.**
- It ***often*** includes undermining and tunneling.





- The depth of a category/stage IV pressure ulcer varies by anatomical location.
- The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and these ulcers can be shallow.
- Category/Stage IV ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint capsule) making osteomyelitis or osteitis likely to occur.
- Exposed bone / tendon is visible or directly palpable.

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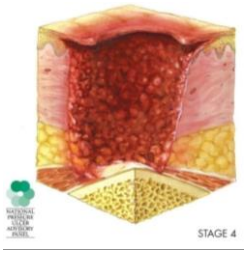
Photo © Ayello

CMS Category/Stage 4 Definition

- Full thickness tissue loss **with exposed bone, tendon or muscle**.
- **Slough or eschar may be present on some parts of the wound bed.**
- It ***Often*** includes undermining and tunneling.



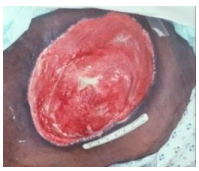


Photo © Ayello

Coding Tips

- The depth of a category/ stage 4 pressure ulcer varies by anatomical location.
- The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and these ulcers can be shallow.
- Stage 4 ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint capsule) making osteomyelitis possible.
- Exposed bone / tendon is visible or directly palpable.

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Exposed Cartilage Pressure Ulcer NPUAP Position Statement

August 27, 2012

- **Pressure Ulcers with Exposed Cartilage Are Stage IV Pressure Ulcers**
- Although the presence of visible or palpable cartilage at the base of a pressure ulcer was not included in the stage IV terminology; it is the **opinion of the NPUAP that cartilage serves the same anatomical function as bone**. Therefore, pressure ulcers that have **exposed cartilage should be classified as a Stage IV**.

www.npuap.org

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CMS agrees with NPUAP

Coding tips on staging pressure ulcers with cartilage

- **Cartilage** serves the same anatomical function as **bone**.
- Therefore, non-mucosal pressures ulcers that have **exposed cartilage** should be classified as **Stage 4 pressure ulcers**.

Unstageable pressure ulcers

NPUAP

- Unstageable

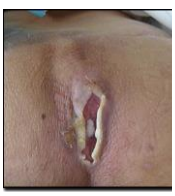
CMS

- Unstageable pressure ulcers due **to non-removable dressing/device**.
- Unstageable pressure ulcers due to **slough** ad/or **eschar**.
- Unstageable pressure ulcers with **suspected deep tissue injury**.

CMS- Unstageable pressure ulcers due to non-removable dressing/device

- Pressure ulcers should be coded as unstageable when the wound bed cannot be visualized due to a **non-removable dressing/device** and the pressure ulcer can thus not be numerically staged.

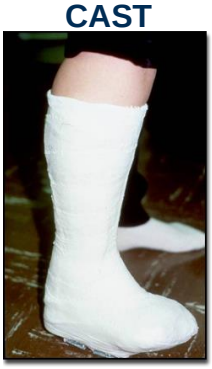
CMS- Unstageable due to non-removable dressing/device



Known pressure ulcer beneath

Examples of non-removable dressing or device include a primary surgical dressing that cannot be removed, an orthopedic device, or a cast.

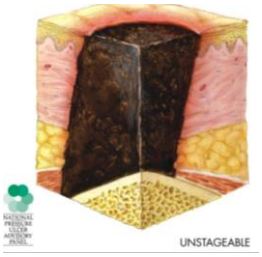
CAST

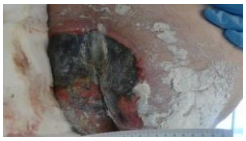


Are these Non - Removable Dressings?

NPUAP Unstageable Definition

- **Full thickness tissue loss** in which the **actual depth** of the ulcer is completely **obscured by slough** (yellow, tan, gray, green or brown) and/**or eschar** (tan, brown or black) in the wound bed.





- Until enough slough and/or eschar is removed to expose the base of the wound, the true depth cannot be determined but **it will be either a category/ stage III or IV.**
- **Stable** (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as "the body's natural (biological) cover" and **should not be removed**.

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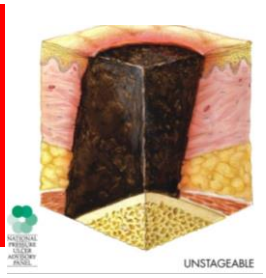
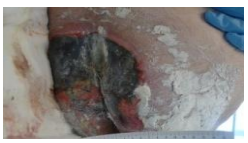
CMS Unstageable Definition

Due to slough and/or eschar

- Pressure ulcers that are known but not stageable due to coverage of the wound bed by slough and/or eschar



- Visualization of the wound bed is necessary for accurate numerical staging



Coding Tips

Lets go to the next slide

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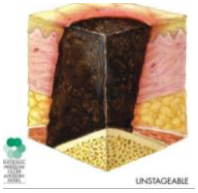
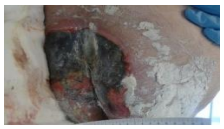
CMS Unstageable Coding tips

Due to slough and/or eschar





- Pressure ulcers that are covered with slough and/or eschar should be coded as unstagable because the true anatomic depth of soft tissue damage (and therefore, the numerical stage) cannot be determined.
- **Only** until enough slough and/or eschar are removed to exposed the anatomic depth of soft tissue damage involved can the numerical stage of the wound be determined.
- **Stable eschar** (i.e., dry, adherent, intact without erythema or fluctuance) on the heels serves as "the body's natural (biological) cover" and **should only be removed after careful clinical consideration, including ruling out ischemia, and in conjunction with the patient's physician, or nurse practitioner, physician assistant, or clinical nurse specialist if allowable under state licensure laws.**

Fluctuance is the term used to describe the texture of wound tissue indicate of underlying unexposed fluid

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CMS Unstageable Coding tips

Due to slough and/or eschar

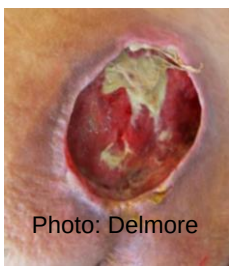
Photo: Delmore

- Once the pressure ulcer is debrided of enough slough and/or eschar such that the anatomic depth of soft tissue damage within the wound bed can be identified, the ulcer can then be numerically staged.

  The pressure ulcer **does not have to be completely debrided or free of all slough and/or eschar tissue** for restaging of the ulcer to occur.

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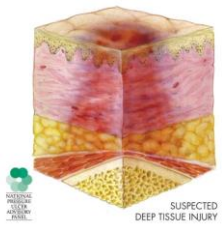
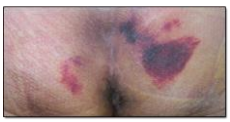
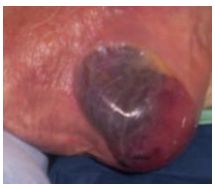
NPUAP **Suspected Deep Tissue Definition**

- **Purple** or **maroon** localized area of discolored, intact skin or **blood-filled** **blister** due to damage of underlying soft tissue from pressure and/or shear.







- The area may be preceded by tissue that is **painful, firm, mushy, boggy, warmer or cooler** than adjacent tissue.
- Deep tissue injury may be difficult to detect in individuals with dark skin tones.
- Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar.
- Evolution may be rapid exposing additional layers of tissue even with treatment.

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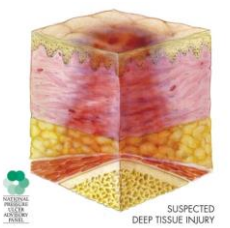
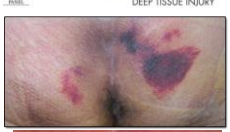
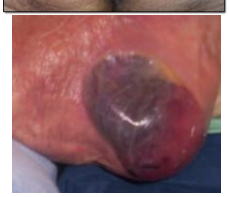
CMS Unstageable pressure ulcers **Deep Tissue** Injury in evolution **Definition**

Pressure ulcers that are unstageable due to suspected deep tissue injury in evolution

- **Pressure ulcers with suspected DTI present a** **a purple** or **maroon** are of discolored, intact ski due to damage of underlying soft tissue.







- The area may be preceded by tissue that is **painful, firm, mushy, boggy, warmer or cooler** as compared to adjacent tissue.
- Deep tissue injury may be difficult to detect in individuals with dark skin tones.

TIP:
Once the suspected DTI has opened to an ulcer, reassess and stage at the appropriate numerical stage

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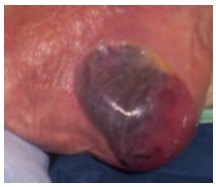
CMS Unstageable pressure ulcer with suspected Deep Tissue Injury (DTI) in evolution



Steps for assessment:

- Examine the area adjacent to, or surrounding the **blister** for evidence of tissue damage. If the tissue adjacent to, or surrounding, the blister ***does not show*** signs of tissue damage (e.g. color change, tenderness, bogginess or firmness, warmth or coolness), **do not code as suspected DTI**.
- In dark-skinned individuals, the area of injury is probably not purple/maroon, but rather darker than the surrounding tissue.

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Where are most sDTI ulcers located?

ORANGE: Buttocks

BLUE: Sacrum

YELLOW: Heels

GREEN: Ankles and foot

RED: Elbow

vanGilder C, MacFarlane GD, Harrison P, Lachenbruch C, Meyer S. The demographics of suspected deep tissue injury in the United states: An analysis of the International Pressure Ulcer Prevalence Survey 2006-2009. *Advances in Skin and Wound Care*. 2010, 23(6):254-61

54

Are the NPUAP definitions of all pressure ulcer stages clearly differentiated?

Stage 1

- Intact skin with non-blanchable redness of a localized area usually over a bony prominence
- Darkly pigmented skin may not have visible blanching: its color may differ from the surrounding area.
- The area may be **painful**, **firm**, **soft**, **warmer** or **cooler** as compared to adjacent tissue. Category/Stage I may be difficult to detect in individuals with dark skintones. May indicate "at risk" persons (a heralding sign of risk

Deep Tissue Injury

- Purple or maroon localized area of discolored intact skin or blood filled blister due to damage of underlying soft tissue from pressure and/or shear
- The area may be preceded by tissue that is **painful** , **firm**, **mushy**, **boggy, warmer** or **cooler** as compared to adjacent tissue
- Deep tissue injury may be difficult to detect in individuals with dark skin tones.
- Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar. Evolution may be rapid exposed additional layers of tissue even with optimal treatment.

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Are the CMS definitions of pressure ulcer stages clearly differentiated?

Stage 1

- Intact skin observable, pressure related alteration of intact skin, whose indictors, as compared to an adjacent or opposite area on the body, may include changes in one or more of the following parameters: skin temperature (**warmth** or **coolness**); tissue consistency (**firm** or **boggy**); sensation (**pain**, **itching**); and or defined area of persistent redness in lightly pigmented skin whereas in darker skin tone, the ulcer may appear with persistent red, blue or purple hues.

Deep Tissue Injury

- Pressure ulcers with suspected DTI present as a purple or maroon area of discolored intact skin due to damage of underlying soft tissue.
- The area may be preceded by tissue that is **painful** , **firm**, **mushy**, **boggy, warmer** or **cooler** as compared to adjacent tissue

Reliance on only one descriptor is inadequate to distinguish stage 1 and suspected deep tissue ulcers. The descriptors are similar for these two types of ulcers (e.g., **temperature** [**warmth** or **coolness**], **tissue consistency** [**firm** or **boggy**]

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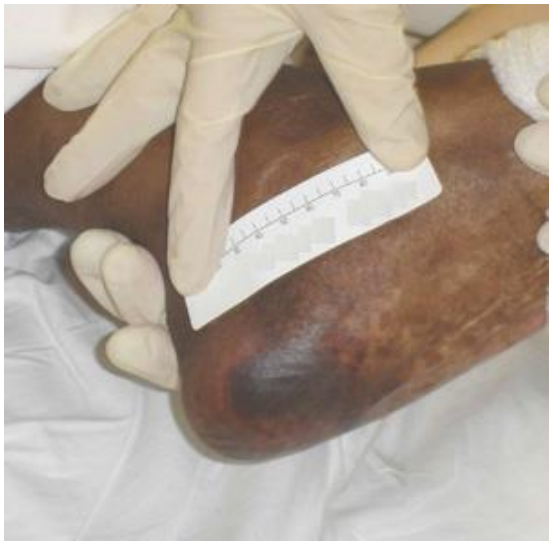
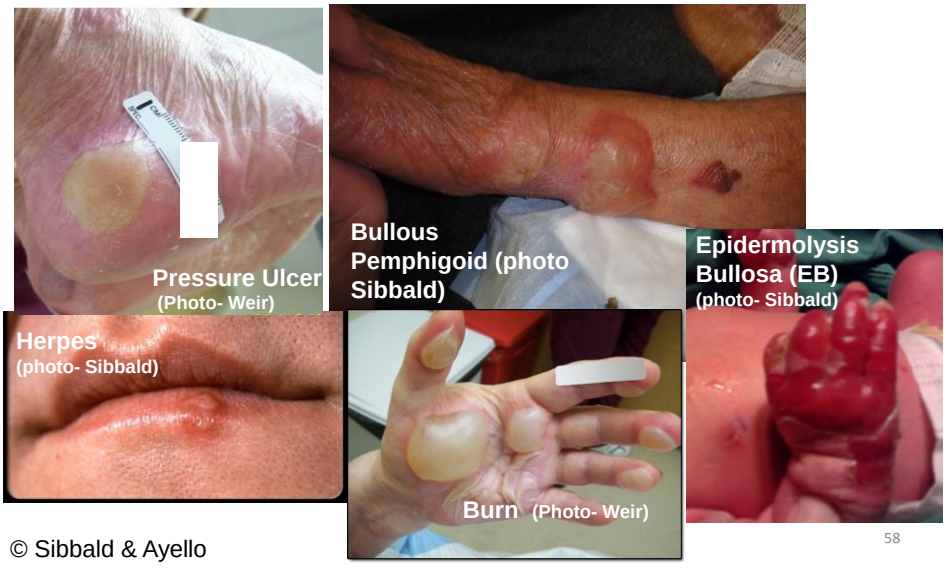
Make sure the blister is a pressure ulcer



57

Blister- Identify the correct cause Pressure Ulcer or something else?

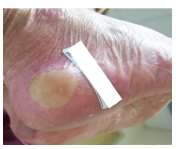


58

NPUAP Blister Pressure Ulcers

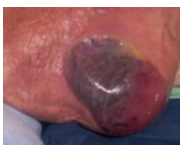
Stage II

- Partial thickness loss of dermis presenting as a shallow open ulcer with a red/pink wound bed, **without slough**. It may also present as an intact or open/ruptured ***serum-filled*** **or sero-sanguineous-filled blister.**



Suspected Deep Tissue Injury

- Purple or maroon localized area of discolored, intact skin or **blood-filled blister** due to damage of underlying soft tissue from pressure and/or shear.



Photos courtesy of Dot Weir and Cindy Labish

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Are the CMS definitions of pressure ulcer stages clearly differentiated?

Stage 2

- Partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. May also present as an intact or open ruptured **blister.**

- Examine the area adjacent to or surrounding an intact blister for evidence of tissue damage. If other conditions are ruled out and the tissue adjacent to, or surrounding the **blister** demonstrates signs of tissue damage, (e.g., **color change**, **tenderness**, **bogginess** or **firmness**, **warmth** or **coolness**) these characteristics suggest a suspected deep tissue injury rather than a stage 2 pressure ulcers.

Deep Tissue Injury

- Pressure ulcers with suspected DTI present as a purple or maroon area of discolored intact skin due to damage of underlying soft tissue.
- The area may be preceded by tissue that is **painful** , **firm**, **mushy**, **boggy**, **warmer** or **cooler** as compared to adjacent tissue

- Examine the area adjacent to or surrounding an intact **blister** for evidence of tissue damage. If the tissue adjacent to, or surrounding the blister does not show signs of tissue damage, (e.g., **color change**, **tenderness**, **bogginess** or **firmness**, **warmth** or **coolness**)do not code as suspected DTI.

60

Revised Figure 4- Blistered Pressure ulcers and sDTI

(Ayello, EA, Levine, JM, Roberson S, Ad*vances in Skin and Wound Care*. 2010:23(9):273-283.

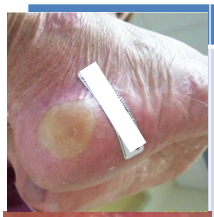
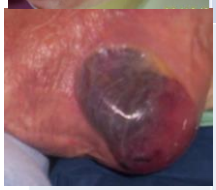
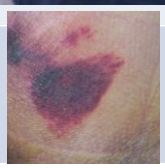
	Appearance	Acute Care	LTC MDS 3.0	
	Serous Filled Blister	Stage II	Stage 2, code under section M0300B. (f no signs of suspected deep tissue injury)	Unstageable- sDTI, code under section M0300G . (if signs of suspected deep tissue)
	Blood filled Blister	sDTI- depth unkown	Stage 2, code under section M0300B. (f no signs of suspected deep tissue injury)	Unstageable- sDTI, code under section M0300G (if signs of suspected deep tissue)
	Intact purple maroon skin injury due to pressure	sDTI- depth unkown	Unstageable- DTI, code under section M0300G.	

Table © Ayello 2010
Photos courtesy of Dot Weir and Cindy Labish

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CMS Pressure Ulcer Classification at a glance

Ulcer/Surrounding Skin Characteristics	Stage
• **Intact skin**, non blanchable erythema	1
• Open shallow ulcer with ***no slough*** • Intact or ruptured **blister** no signs of tissue damage in surrounding skin	2
• full thickness ulcer • can have necrotic tissue, but can see wound bed • **No** bone, tendon ,muscle visible	3
• Full thickness ulcer • Can have necrotic tissue, but can see wound bed • **Bone, tendon, muscle visible**	**4**
• Known pressure ulcer underneath non-removable cast, dressing or medical device • Necrotic tissue covers wound bed	**Unstageable- non-removable dressing/device** **Unstageable- slough/eschar**
• **Purple, maroon** discoloration of **intact** • **Signs of tissue damage in skin surrounding the blister**	**Unstageable DTI**

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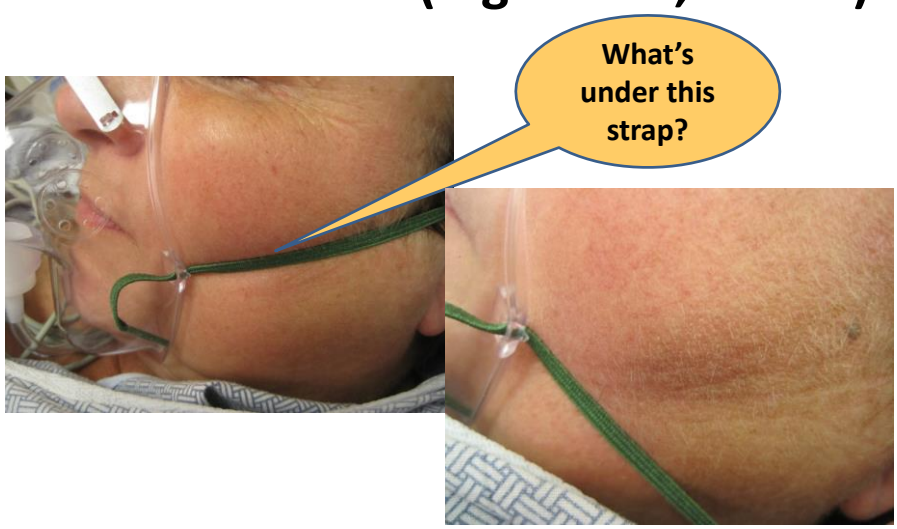
Distribution of pressure ulcer staging 2006 to 2009

Stage	2006	2007	2008	2009
I	31%	30%	28%	26%
II	38%	37%	37%	36%
III	8%	7%	7%	7%
IV	7%	7%	6%	7%
sDTI	**3%**	**4%**	**7%**	**9%**
Unstageable	13%	15%	15%	15%

vanGilder C, MacFarlane GD, Harrison P, Lachenbruch C, Meyer S. The demographics of suspected deep tissue injury in the United states: An analysis of the International Pressure Ulcer Prevalence Survey 2006-2009. *Advances in Skin and Wound Care*. 2010, 23(6):254-61

63

Look at skin under skin folds and medical devices (e.g. tubes, drains)



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Mucosal Pressure Ulcers (MPrU) An NPUAP Position Statement

- **Definition:** MPrU are pressure ulcers found on mucous membranes with a history of a medical device in use at the location of the ulcer.
- **Devices** include oxygen tubing, endotracheal tubes, bite blocks, orogastric and nasogastric
- Epithelium of mucosa is **not keratinized**
- **"Pressure ulcers on mucosal surfaces are not to be staged using the pressure ulcer staging system.**

www.npuap.org

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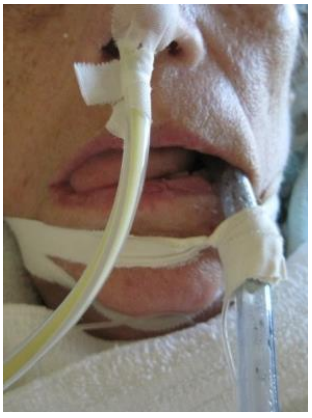
Are all skin injuries staged as pressure ulcers?

CMS provides guidance that

Mucosal pressure ulcers:

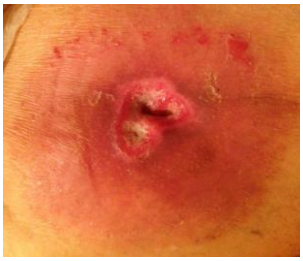
- **Are not staged using the pressure ulcer staging system because anatomical tissue comparisons cannot be made.**
- **Are not reported in the pressure ulcer section.**

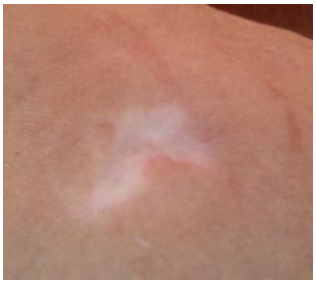


66

Pressure Ulcer treated with a surgical flap

- Once a pressure ulcer has been closed with a **surgical flap**
- It is **no longer** counted or coded as a pressure ulcer.
- It is now a **surgical wound**





Photos E. Chiu

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Don't Reverse Stage

NPUAP Position Statement
www.npuap.org

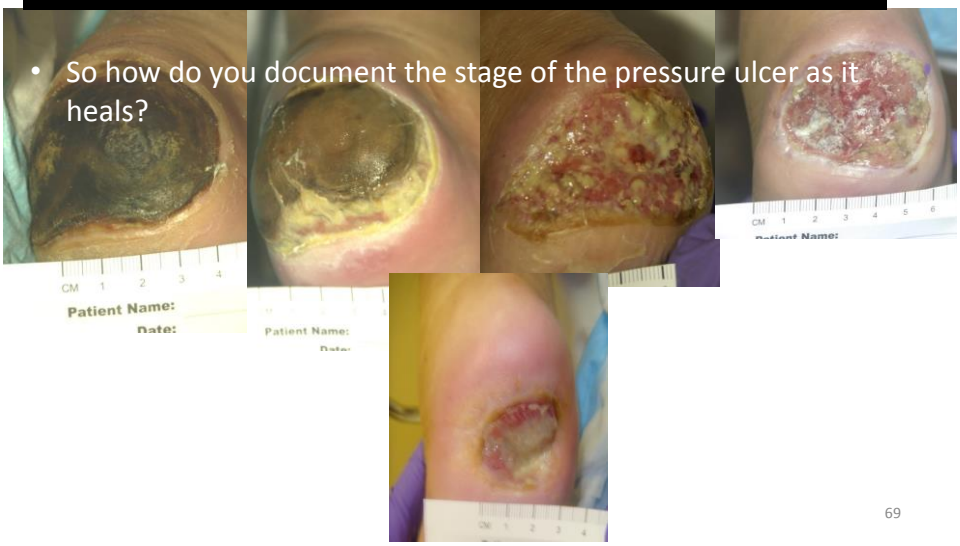
- Physiologically inaccurate
- Ulcer filled with granulation not original tissue

Stage 4 → **The initial pressure ulcer stage does not change despite healing** → **Stage 1**

68

As the pressure ulcer heals

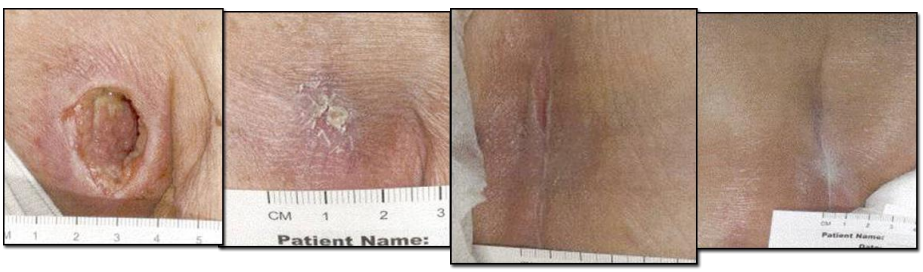
- Do not reverse or back stage!
- So how do you document the stage of the pressure ulcer as it heals?



69

As the pressure ulcer heals

Do not reverse or back stage!
So how do you document the stage of the pressure ulcer as it heals?



If the pressure ulcer has ever been classified at a higher numerical stage than what is observed now, it should continue to be classified at the higher numerical stage.

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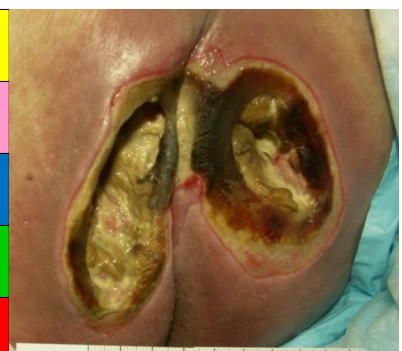
Skin and Wound Quiz

71

How should you stage this wound?

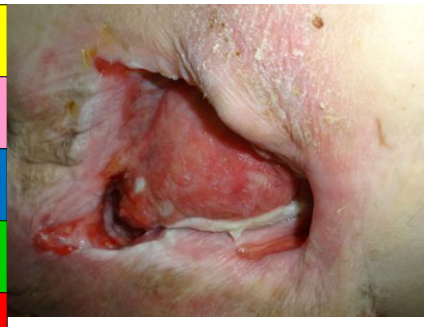
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



72

How should you stage this wound?

- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



How should you stage this wound?

- Stage 1
- Stage 2
- Stage 3
- Stage 4
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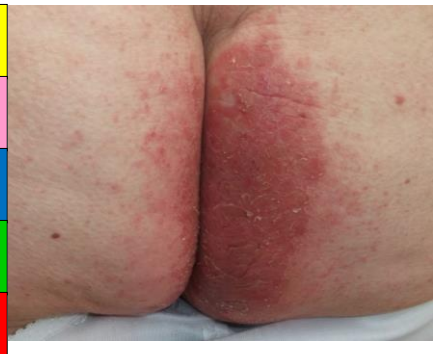


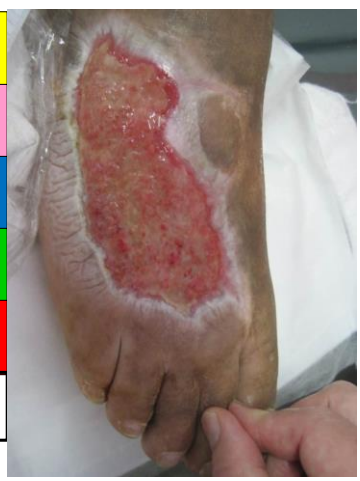
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

75

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



76

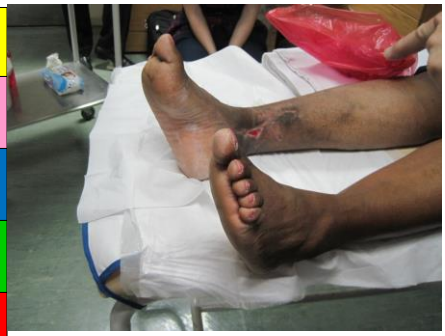
How should you stage this wound?

- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar

77

How should you stage this wound?

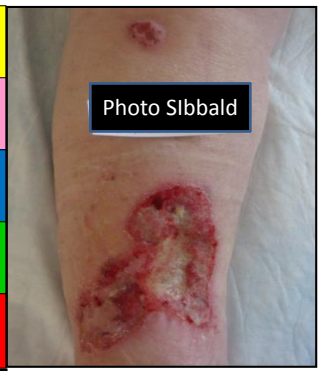
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



78

How should you stage this wound?

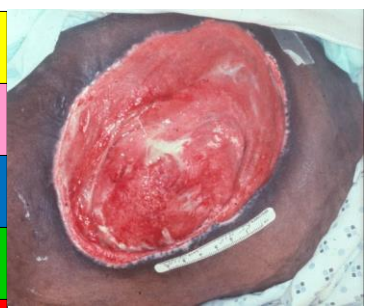
Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



79

How should you stage this wound?

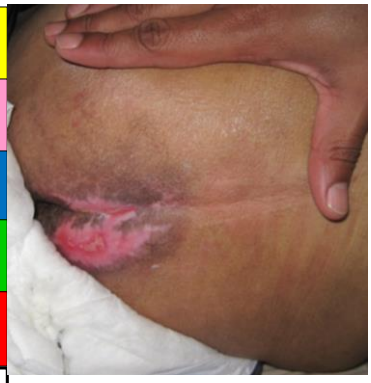
Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



80

How should you stage this wound?

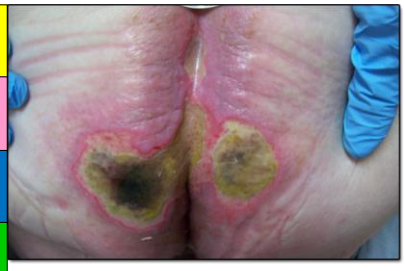
Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



81

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



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Objectives- Participants have:

- **Differentiated** pressure ulcers from other skin injuries
- Described pressure ulcer **stages**
- **Compared** CMS and NPUAP staging definitions

Answers to Interactive Questions and Wound Staging Quiz

Pressure Ulcer Staging Quiz- True or False

Statement	True	False
An ulcer on the mucosa from a medical device should be staged		√
Pressure ulcer staging is based on the depth in cm		√
As the ulcer heals, "reverse or back" stage the ulcer		√
Staging of pressure ulcers requires clinical skills including minimally observation and palpation	√	
CMS definition of stage II pressure ulcer differs from NPUAP	√	

85

Where are most sDTI ulcers located?

ORANGE: Buttocks 12.9%

BLUE: Sacrum 19.1%

YELLOW: Heels 41.4%

GREEN: Ankles and foot 9.9%

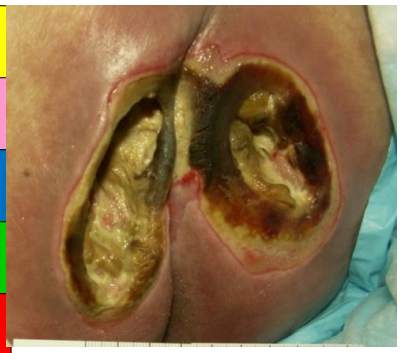
RED: Elbow 2.5%

vanGilder C, MacFarlane GD, Harrison P, Lachenbruch C, Meyer S. The demographics of suspected deep tissue injury in the United states: An analysis of the International Pressure Ulcer Prevalence Survey 2006-2009. *Advances in Skin and Wound Care*. 2010, 23(6):254-61

86

How should you stage this wound?

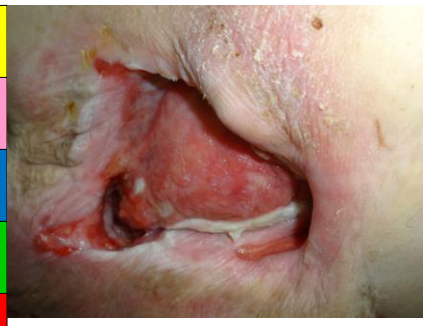
Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



Pressure ulcer
Unstageable

How should you stage this wound?

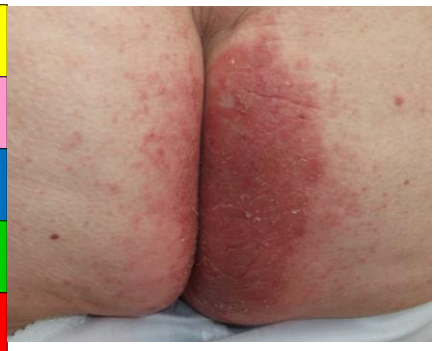
Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



Pressure ulcer
Stage 4

How should you stage this wound?

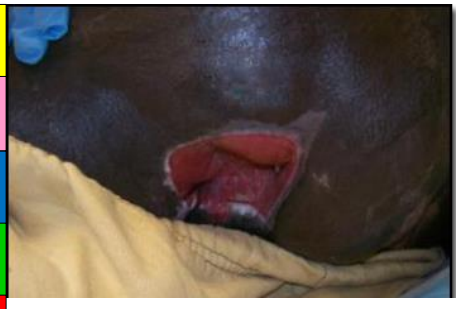
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



MASD, Not a pressure ulcer
Do not stage this

How should you stage this wound?

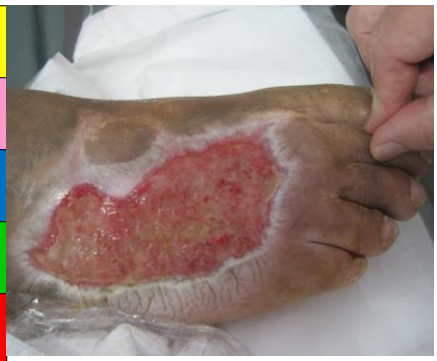
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



Pressure ulcer
Stage 3

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar



Not a Pressure ulcer
Peripheral vascular ulcer

91

How should you stage this wound?

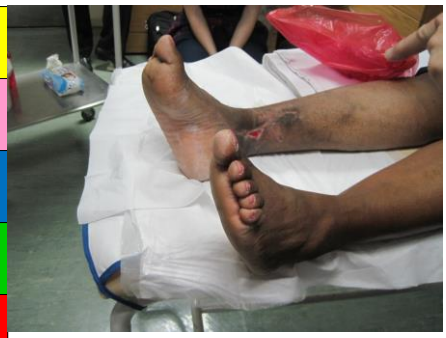
Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Pressure ulcer
Stage 4

92

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

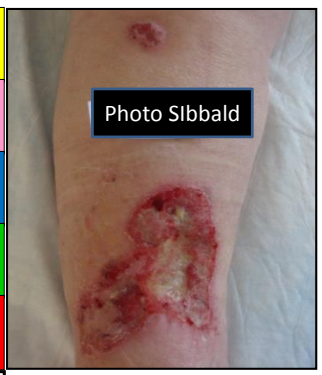


Not a Pressure ulcer
Venous ulcer

93

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

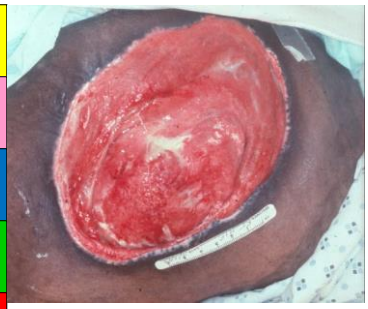


Basal cell carcinoma,
Not a pressure ulcer

94

How should you stage this wound?

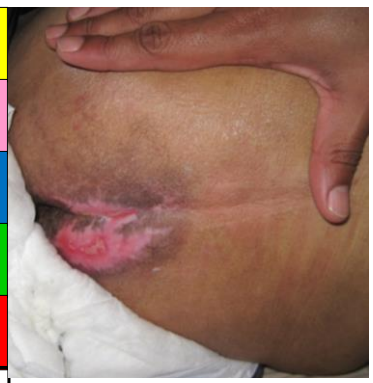
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



Pressure ulcer
Stage 4

How should you stage this wound?

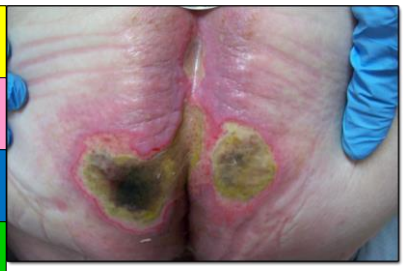
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



Pressure ulcer
Stage 3

How should you stage this wound?

- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar



Pressure ulcer
Unstageable