



HEALTHCON

CODING & BILLING FOR CHRONIC WOUND CARE

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Topics for Discussion

- Wounds vs. Ulcers
- Anatomy and Physiology of Wound Healing
- Acute vs. Chronic Wounds
 - Wound Etiologies
 - Wound Classifications
 - Surgical Treatment Modalities
 - Medical Treatment Modalities

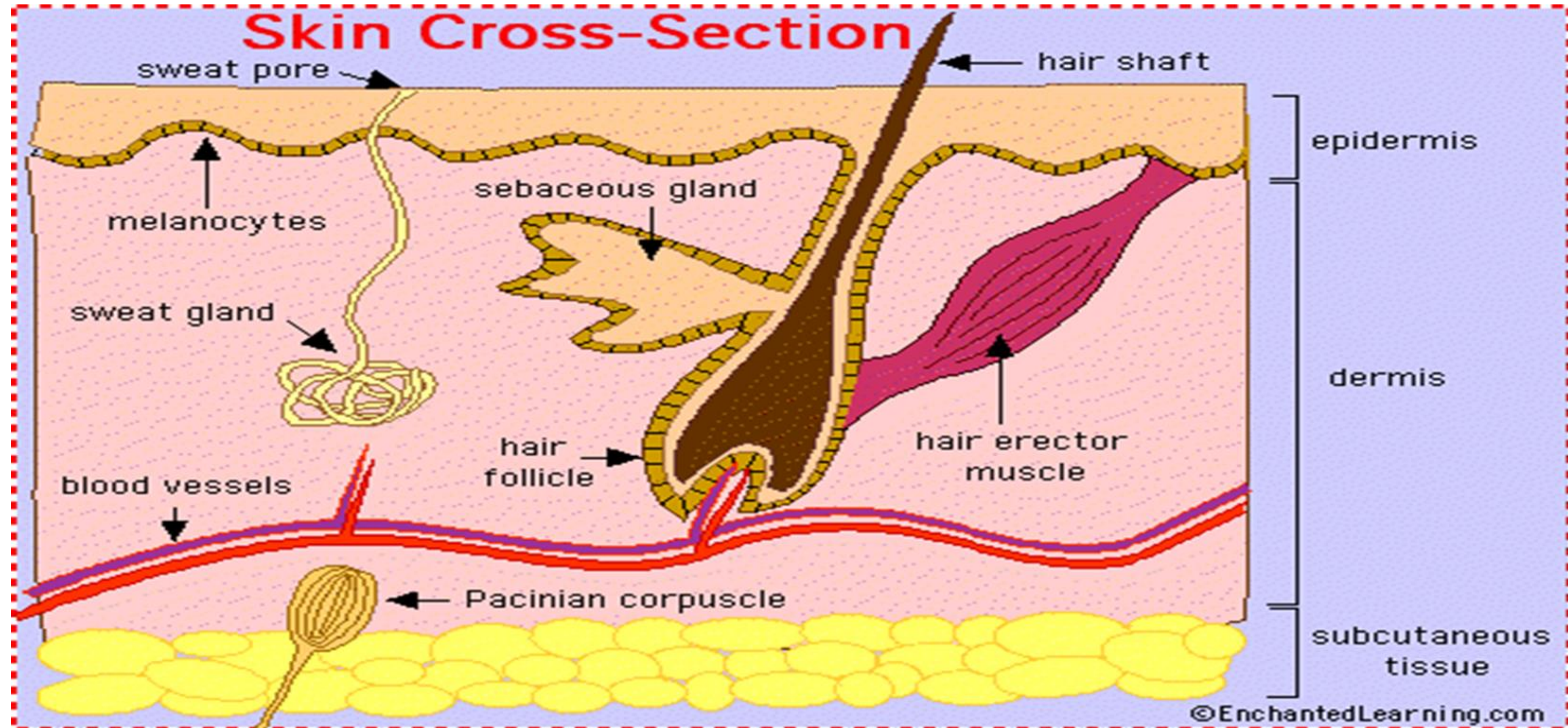
WOUNDS VS. ULCERS

Wounds vs. Ulcers

- Wound - A wound is an acute disturbance of tissues by an external force.
 - Superficial
 - Open
 - Complexity
- Ulcer - An ulcer is defined as a gradual disturbance of tissues by an underlying etiology/pathology.

ANATOMY & PHYSIOLOGY OF WOUND HEALING

Skin Anatomy

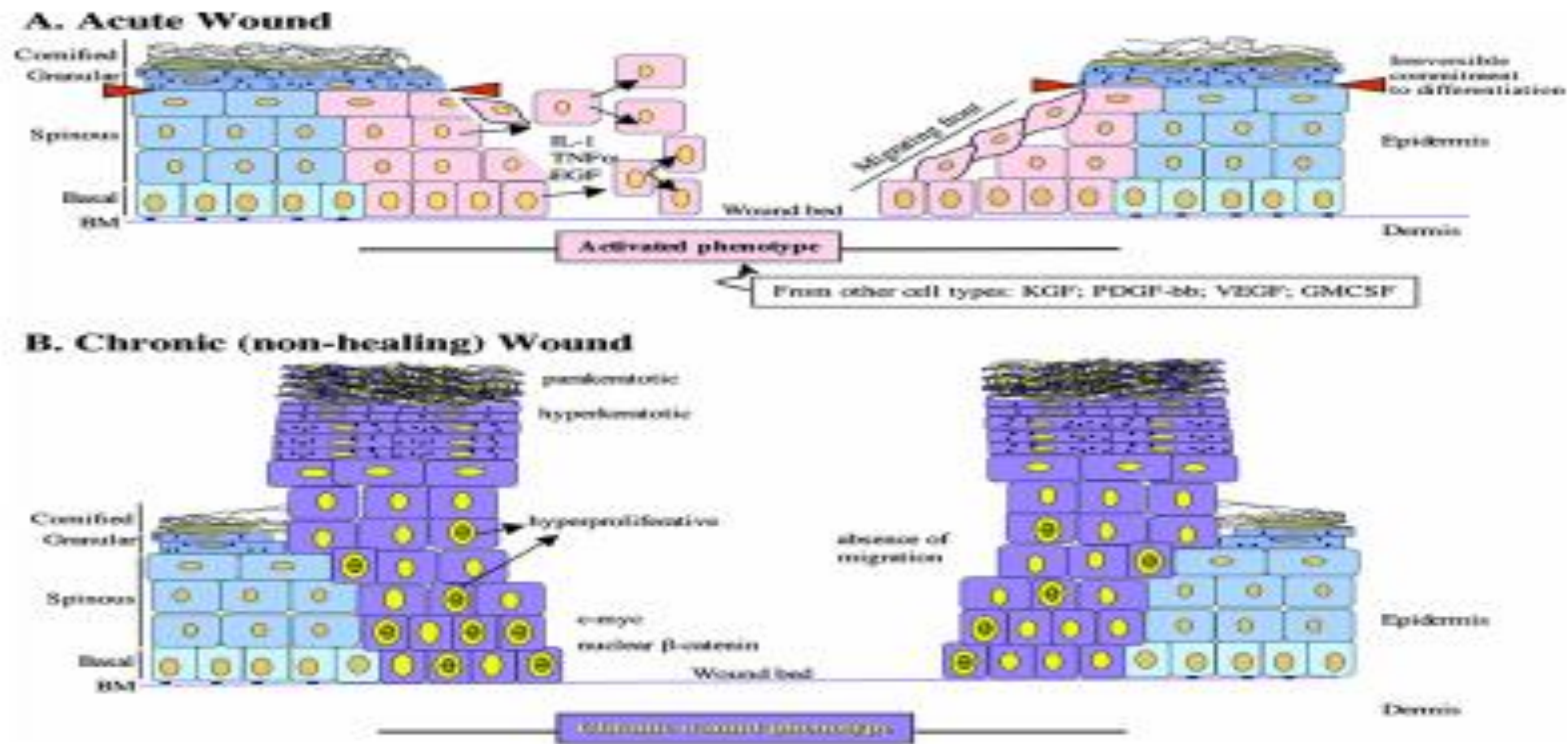


Physiology of Healing

1. Hemostasis – Vasoconstriction; platelet release; clot formation
2. Inflammation – Vasodilation; Neutrophils appear to destroy dying cells; Macrophages clean the ulcer and produce growth factors
3. Proliferation – Angiogenesis; Fibroblasts synthesize collagen fibers; Collagen fibers produce keratinocytes
4. Maturation - Shrinking and strengthening of the scar

The Healing Cascade

Chronic vs. Acute Wounds



ACUTE VS. CHRONIC WOUNDS

Wound Classification

- Wounds are classified as:
 - Superficial
 - Minor
 - Complicated

Superficial Wound

- An example of a superficial wound would be an abrasion, a scratch, insect bite or blister



Minor Wound

- An example of a minor wound would be a shallow laceration



Complicated Wound

- While there is no simple definition of what constitutes a complicated wound, in practice the term tends to refer to wounds with one or more complicating factors, such as exudate, infections, comorbidity and polypharmacy.



Chronic Wounds (Ulcers)

- Types of Ulcers
 - Pressure
 - Diabetic
 - Venous

WOUND ETIOLOGIES

Pressure Ulcers

- Pressure ulcers are captured first by the site of the ulcer and then the stage. This is a superficial pressure ulcer, or Stage I



This image displays a well-defined, superficial decubitus ulcer.

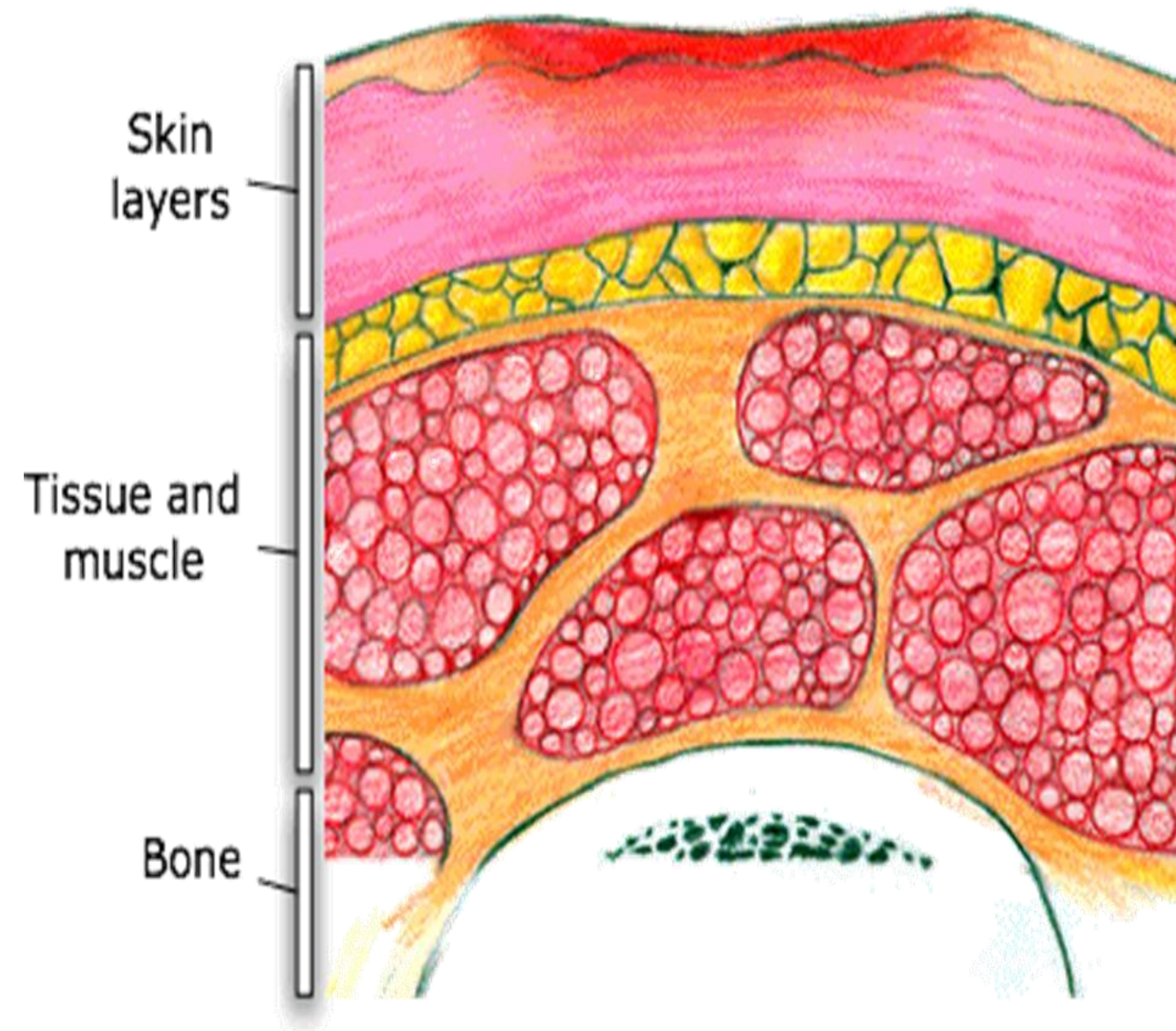
Coding Pressure Ulcers

- ICD-10 Codes are found in the L chapter, beginning with L89
 - L89.0-- Pressure ulcer of elbow
 - L89.1-- Pressure ulcer of back
 - L89.2-- Pressure ulcer of hip
- indicates specific part of back, for instance and then the Stage
- L89.110 Pressure ulcer of right upper back, stage 1

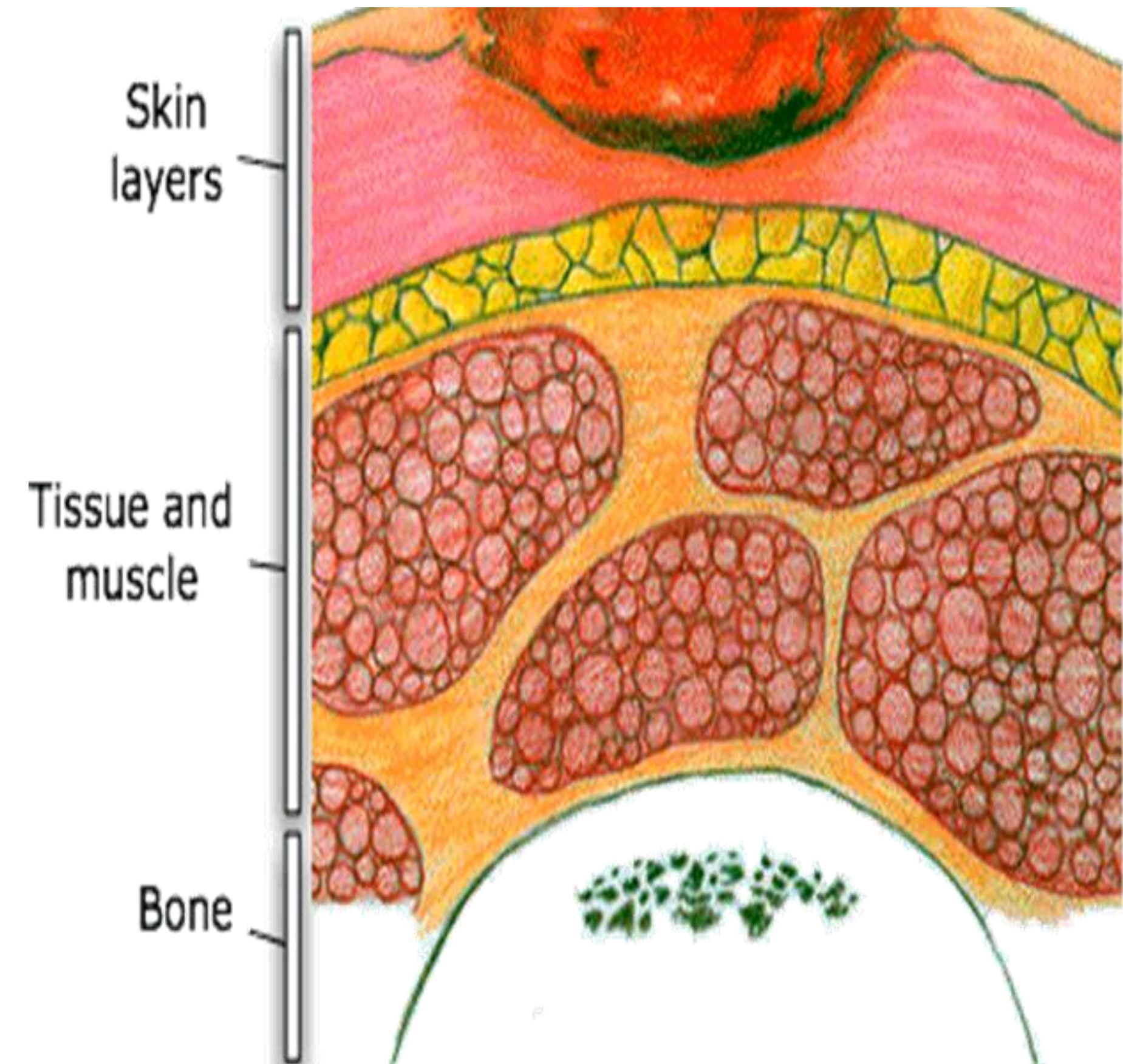
Pressure Ulcer Site and Staging Codes

- L89.15 – Pressure ulcer of the sacrum
- L89.150 – Pressure ulcer of the sacral region, unstageable
- L89.151 – Pressure ulcer of the sacral region, stage 1
- L89.512 – Pressure ulcer of the sacral region, stage 2
- L89.513 – Pressure ulcer of the sacral region, stage 3
- L89.514 – Pressure ulcer of the sacral region, stage 4
- L89.519 – Pressure ulcer of the sacral region, unspecified stage

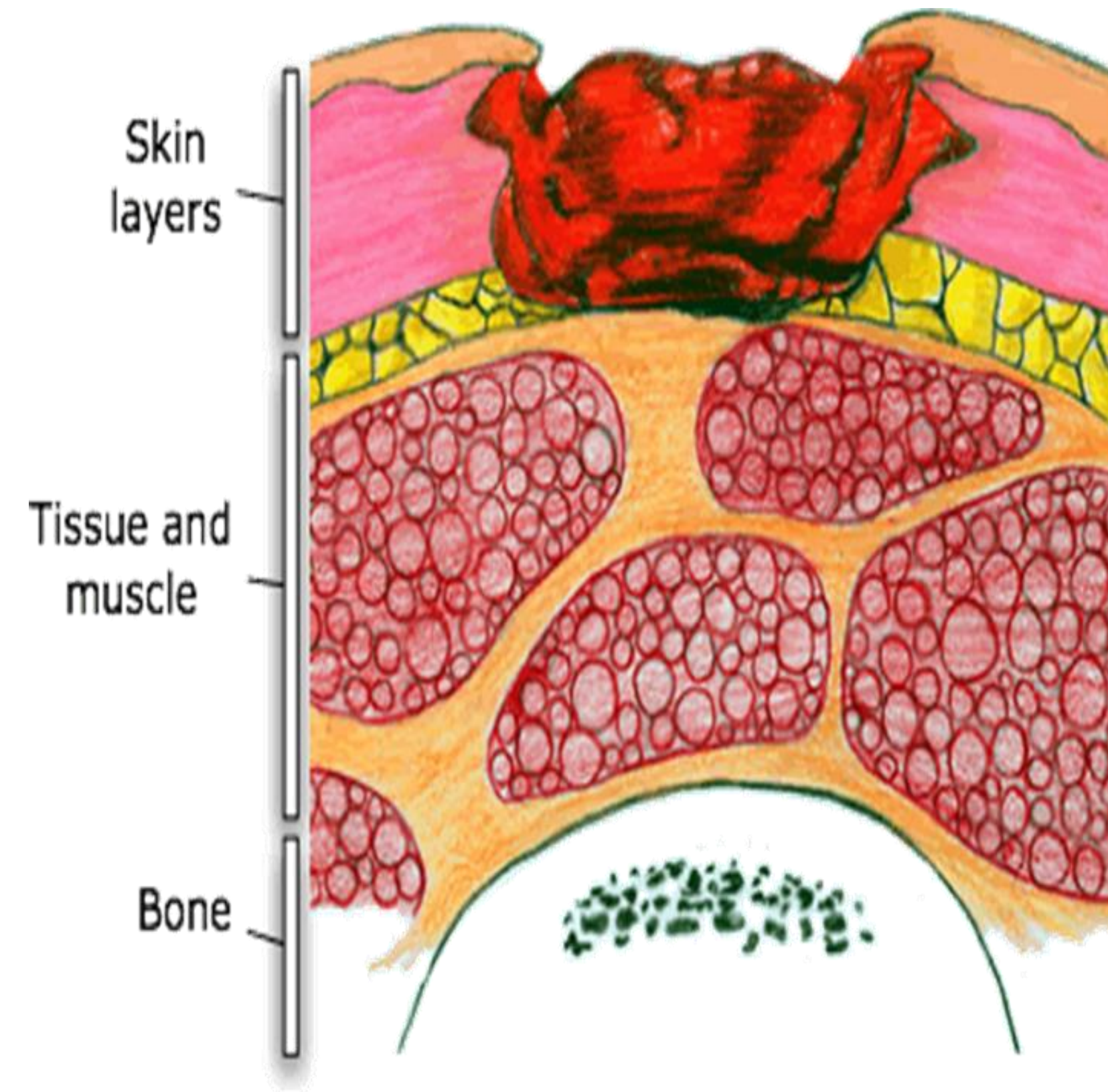
Stage 1



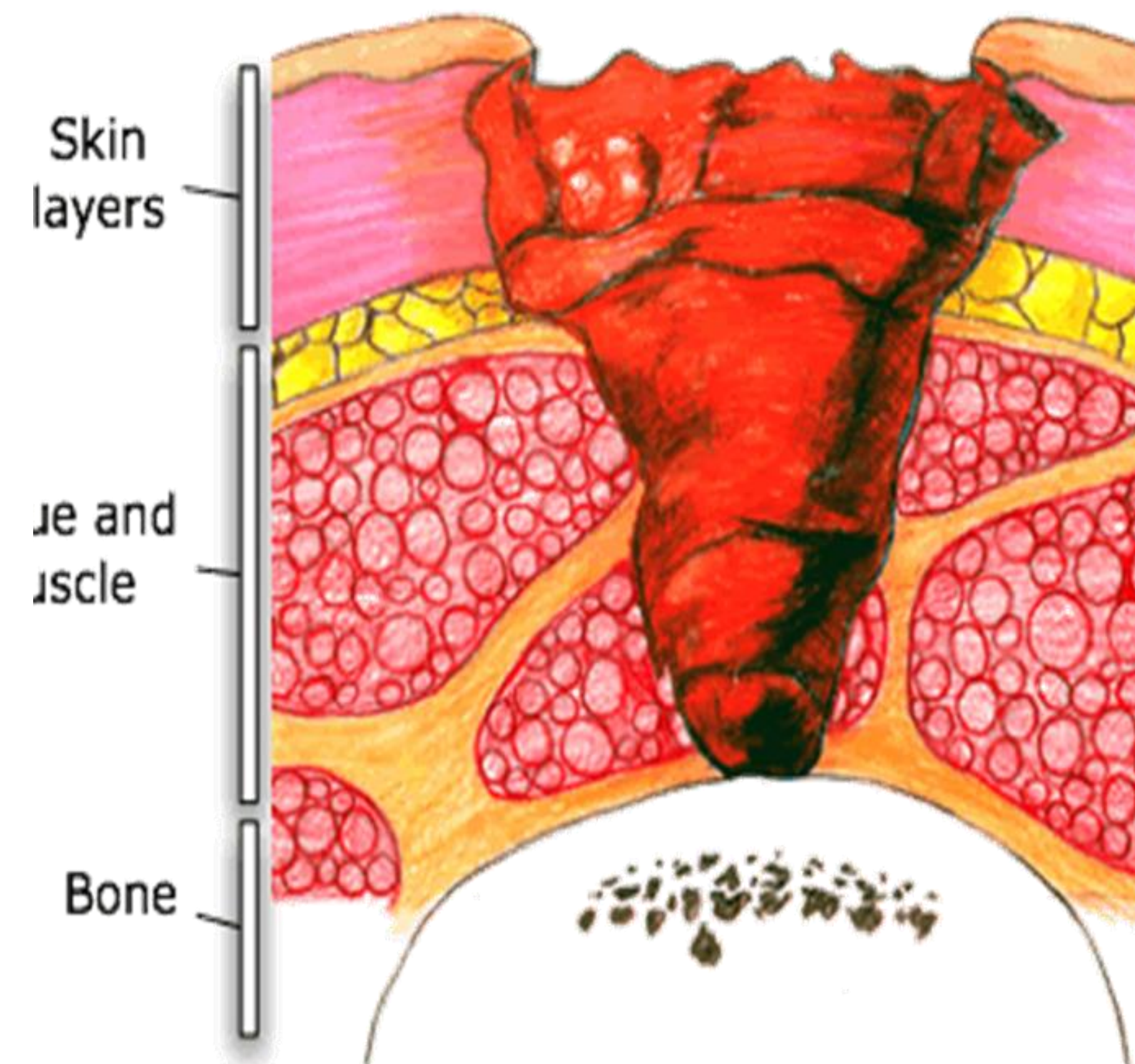
Stage 2



Stage 3



Stage 4



Test Yourself

The patient was placed under general anesthesia. Sacrum area was prepped and draped in sterile fashion. The ulcer measures 15cm x 10cm. Debridement of the Stage 4 sacral ulcer was done with a 10 blade scalpel to the area. The coccyx could be felt at one point. Excisional debridement was done down into the bone until healthy bleeding tissue was seen. It was made sure that we did not get into the rectum since the sacrum ulcer was deep. Hemostasis was acquired with the Bovie. The area looked clean and dry. It was packed with iodoform gauze and dry 4 x 4s. The patient was extubated and transferred to the PACU in stable condition.

Venous Leg Ulcer (VLU)

Venous Leg Ulcer

- First code the underlying etiology and then the stage

Caused by:

- Impaired/compromised circulation



VLU Underlying Etiologies

Underlying etiologies:

- Atherosclerosis of native arteries of left leg with ulceration of calf (I70.242)
- Chronic venous hypertension with ulceration of right lower extremity (I87.311)
- Chronic venous hypertension with ulceration and inflammation of left lower extremity (I87.332)
- Type II Diabetes Mellitus with other skin ulcer(E11.622)
- Postphlebitic syndrome with ulcer (I87.01-)
- Postphlebitic syndrome with ulcer and inflammation (I87.03-)

DFU Coding

- E8 Diabetes Mellitus (DM) due to underlying conditions
- E9 Drug or Chemical induced diabetes mellitus
- E10 Type I diabetes mellitus
- E11 Type II diabetes mellitus
- E13 Other specified diabetes mellitus

Code also:

- L97.1 – thigh
 - L97.101 – unspecified thigh, skin only
- L97.2 – calf
 - L97.211 – right calf, skin only
- L97.3 – ankle
 - L97.322 – left ankle, fat exposed
- L97.4 – heel and midfoot
 - L97.423 – left heel/medfoot, muscle
- L97.5 – other part of foot
 - L97.501 – other part of unspec, foot, skin only
- L97.8 – other part of lower leg
 - L97.814 – other part right lower leg, bone
- L97.9 – unspecified part of lower leg
 - L97.909 – unspec part of lower leg, unspec severity

Diabetic Foot Ulcer (DFU)

- Most common diabetic complications:
 - Neuropathy
 - Foot ulcers



DFUs and the Wagner Scale

Wagner Scale

- ▶ Commonly used by podiatrists; wounds graded based on depth of ulcer and presence of infection or necrosis
- ▶ Developed for diagnosis and treatment of dysvascular foot, especially for diabetic and neuropathic ulcers
- ▶ 6 grades, 0–5 in order of severity of breakdown
 - Grade 0: Pre-ulcerative lesions, healed ulcers, presence of bony deformity; Skin is intact
 - Grade 1: Superficial ulcer without subcutaneous involvement
 - Grade 2: Penetration through the subcutaneous tissue; may expose bone, tendon, ligament, or joint capsule
 - Grade 3: Osteitis, abscess or osteomyelitis
 - Grade 4: Gangrene of digit
 - Grade 5: Gangrene of foot requiring disarticulation/amputation

SURGICAL TREATMENT OF WOUNDS

Debridement

Sharp surgical debridement is the method of choice

- Involves the use of a
 - Scalpel
 - Scissor
 - Other sharp instrument

Types of Debridement

Types of Debridement:

- Sharp Surgical
- Enzymatic
- Mechanical
- Autolytic
- Larval

Debridement

- **Surgical debridement vs. Active Wound Care Management**
 - **Surgical debridement**
 - 11042 – 11048 requires the use of a sharp, surgical instrument
 - **Active Wound Care Management**
 - 97597 – 97598 Selective debridement
 - 97602 Non-selective debridement
 - 97605 – 97608 Negative pressure wound therapy
 - 97610 Non thermal, non-contact ultrasound therapy

Sharp Surgical Debridement



Muscle & Bone Debridement



Muscle



Bone

Test yourself

A patient presents to the wound center for treatment of his DFU of the left plantar surface of the distal first metatarsal head. The ulcer measures 2cm x 3cm x .3 cm. The physician performs a sharp debridement using a scalpel to removed devitalized tissue, debris and bioburden including subcutaneous and tissue. No anesthesia was used as the patient is neuropathic. Bleeding was controlled with pressure. The ulcer was dressed with a non-occlusive dressing and kerlix wrap.

Code the debridement:

What if:

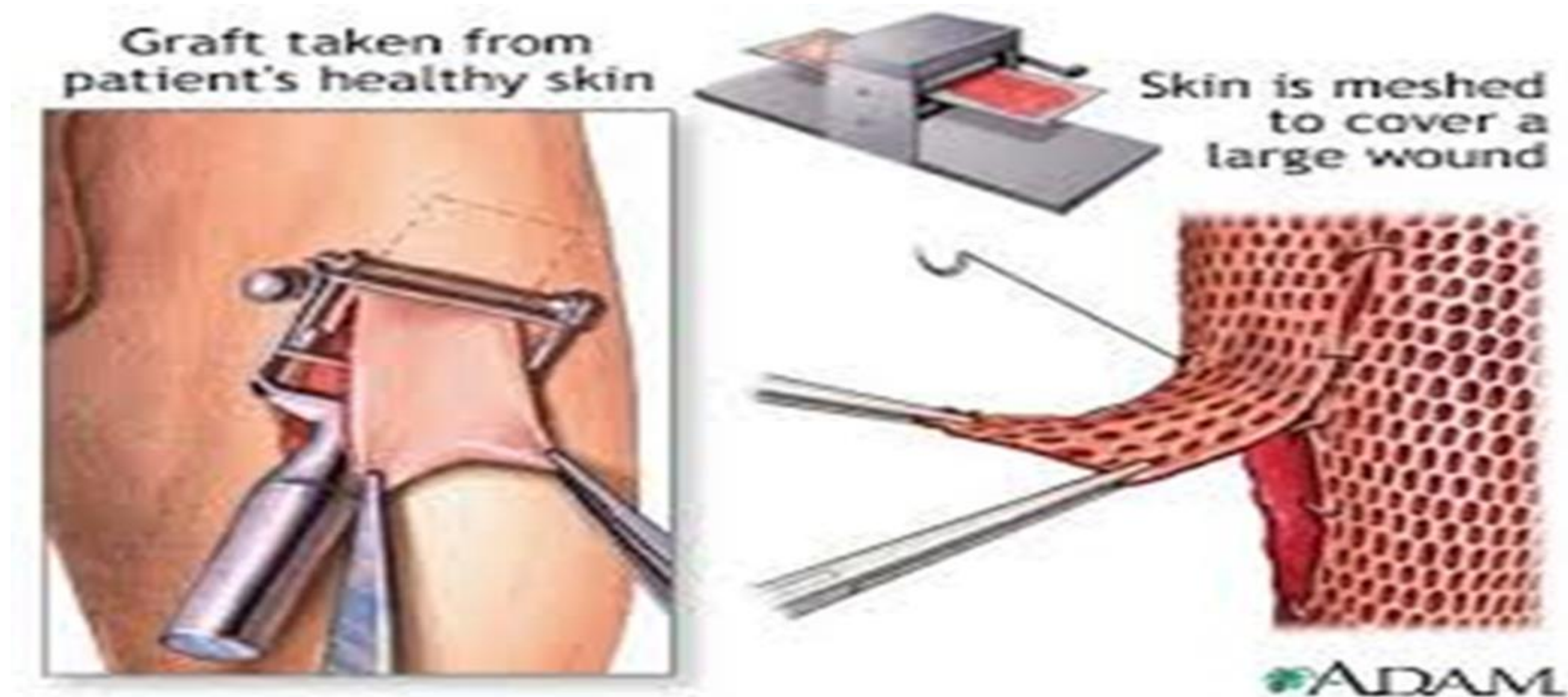
- Bilateral total contact casts were applied?
- The right foot DFU was also debrided (measures 4cm x 5cm x .4cm)?
- An E/M service was provided?

Grafts

- Types of grafts
 - Autografts
 - Allografts
 - Homografts
 - Xenografts

Autograft

- An Autograft is a tissue graft taken from one part of a patient's body and transferred to another part of the patient's body.

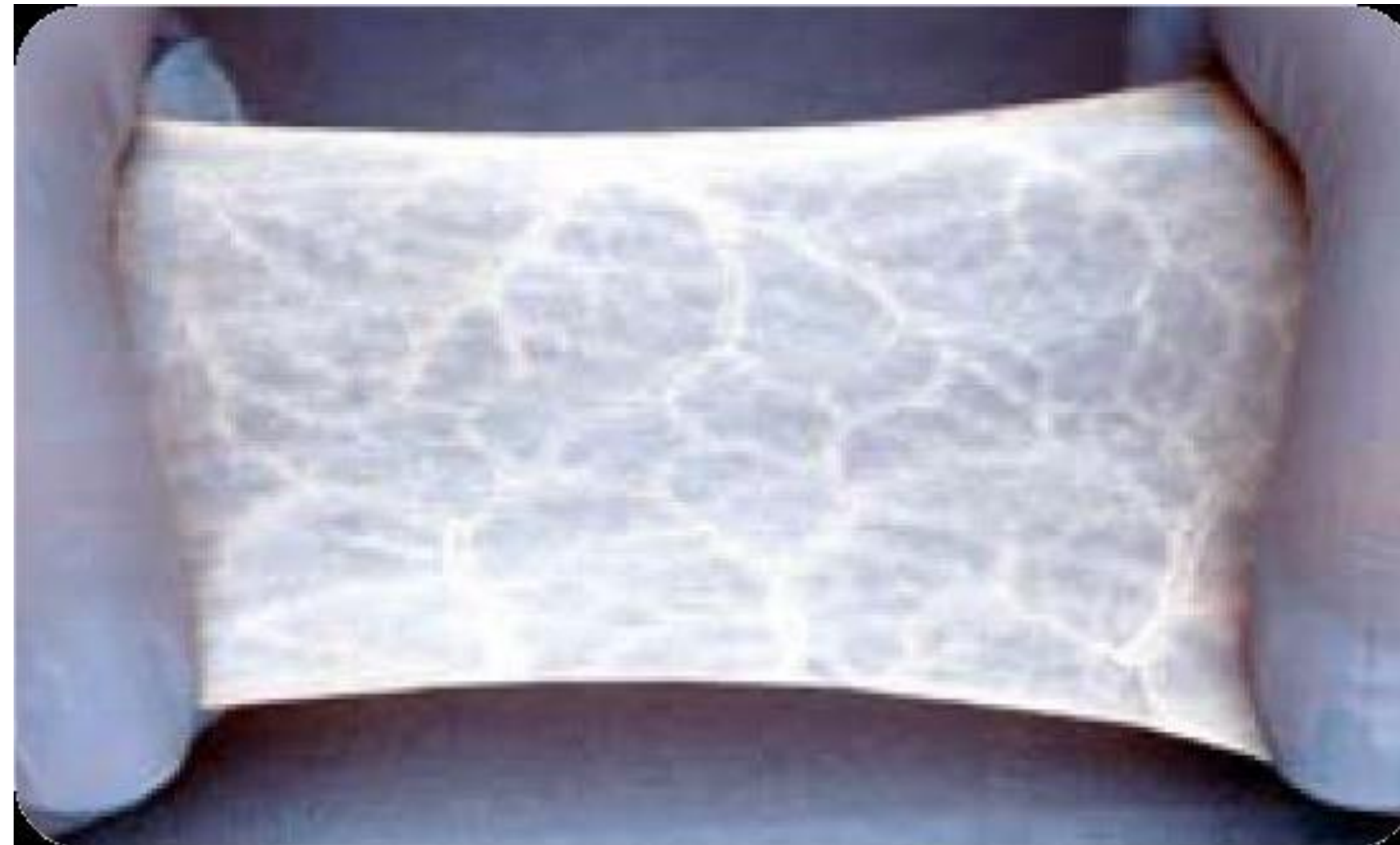


Allograft and Homograft

- Allograft
 - Is from a human donor
 - Can be either
 - A homograft
 - An allograft
- Homograft
 - Synonymous with allograft
 - Human to human

Xenografts

- Xenografts are tissue grafts taken from one species of animal to another species. Example:
- Oasis – porcine intestinal tissue (lab grown)



Skin Substitutes

- Skin Replacement
 - Grown in a laboratory
 - Used in:
 - Trauma
 - Burns
 - Skin diseases
 - Chronic non-healing ulcers

Skin Substitute Application

<u>CPT</u>	<u>DESCRIPTION</u>
15271	APPLIC OF SKIN SUBSTITUTE 1 ST 25 SQ CM, TRUNK/ARMS/LEGS
15272	; EA ADD 25 SQ CM, TRUNK/ARMS/LEGS
15273	APPLIC OF SKIN SUBSTITUTE 1 ST 100 SQ CM, TRUNK/ARMS/LEGS
15274	; EA ADD 100 SQ CM, TRUNK/ARMS/LEGS
15275	APPLIC OF SKIN SUBSTITUTE 1 ST 25 SQ CM, HANDS/FEET/DIGITS
15276	;EA ADD 25 SQ CM, HANDS/FEET/DIGITS
15277	APPLIC OF SKIN SUBSTITUTE 1 ST 100 SQ CM, HANDS/FEET/DIGITS
15278	; EA ADD 100 SQ CM, HANDS/FEET/DIGITS

Skin Substitute Guidelines

- CPT guideline
 - When coding a skin substitute you must:
 - Code both the product (the skin substitute itself) and
 - Code the application
- For example:

• Q4133	Grafix® Prime	12 units (12 sq cm)
• 15275	Application – foot	1 unit (first 25 sq cm)

Test Yourself

- The patient presents for graft #5 of Grafix Prime (Q4133) to his bilateral VLUs on each lateral calf. The right measure 5cm x 8cm and the left measures 5cm x 10cm. Four pieces of 5cm x 5cm graft material are placed, two on each leg. The wounds are dressed with non-occlusive dressings and wrapped with Ace bandages for compression. There is no waste.
- Code the graft application

Q4133 x 100 (units)

15271 x 1 unit

15272 x 3 units

MEDICAL TREATMENT OF WOUNDS

Selective/Non-selective Debridement

- 97597 – 97598 Selective debridement
- 97602 Non-selective debridement

Hyperbaric Oxygen Therapy (HBO)

Clinical Studies show the value of HBO Therapy speeding up the healing process in many types of wounds, thereby reducing the risk of amputation.

HBO Benefits

Cellular Energy and Metabolism

- Improved local tissue oxygenation and Improved cellular energy metabolism
- Decreased local tissue edema

Antibacterial Effect

- Directly affects anaerobic organisms
- Improved leukocyte bacterial killing and Increased effectiveness of antibiotics

Regenerating Wound Tissue Effect

- Reduction of inflammation and Increase in growth factors and receptors (PDGF, TGF- β , VEGF)
- Promotes activated stem cell release and Promotes collagen deposition
- Promotes extracellular matrix
- Promotes angiogenesis

Monoplace Chamber



Multiplace Chamber



Coding & Billing for HBO

Facility - Medicare patients billed with HCPCS G0277 for each 30 minute interval of HBO

Physician - 99183 with unit of 1 for each patient (supervision only)

Commercial claims billed with CPT 99183 and only 1 unit

Test Yourself

The patient, a type II controlled diabetic with a diabetic Grade III ulcer of the right forefoot, is undergoing HBO therapy. Today is the 4th treatment. The treatment began at 0830 and ended at 1047. Code the treatment for the facility and the supervision for the physician.

Facility

C1300 x 5

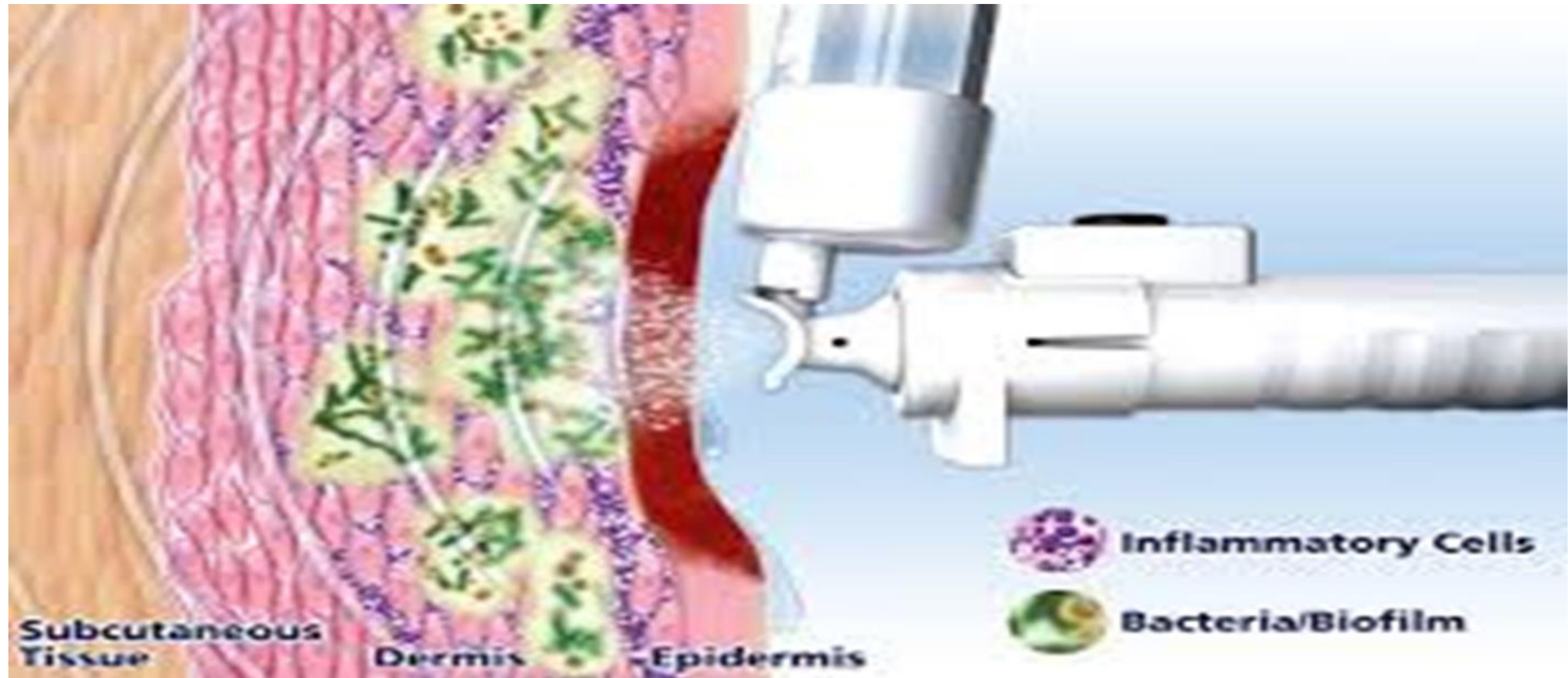
Physician

99183 x 1

Mist and NPWT

- 97605 Negative pressure wound therapy; less than or equal to 50 sq cm.
- 97606 ; greater than 50 sq cm
- 97610 Low frequency, non thermal, non-contact ultrasound therapy, per day

Mist Therapy



Negative Pressure Wound Therapy



Offloading

Total Contact

Cast



Cam Walker



Wheelchair



Crutches



Questions?



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CEU#
