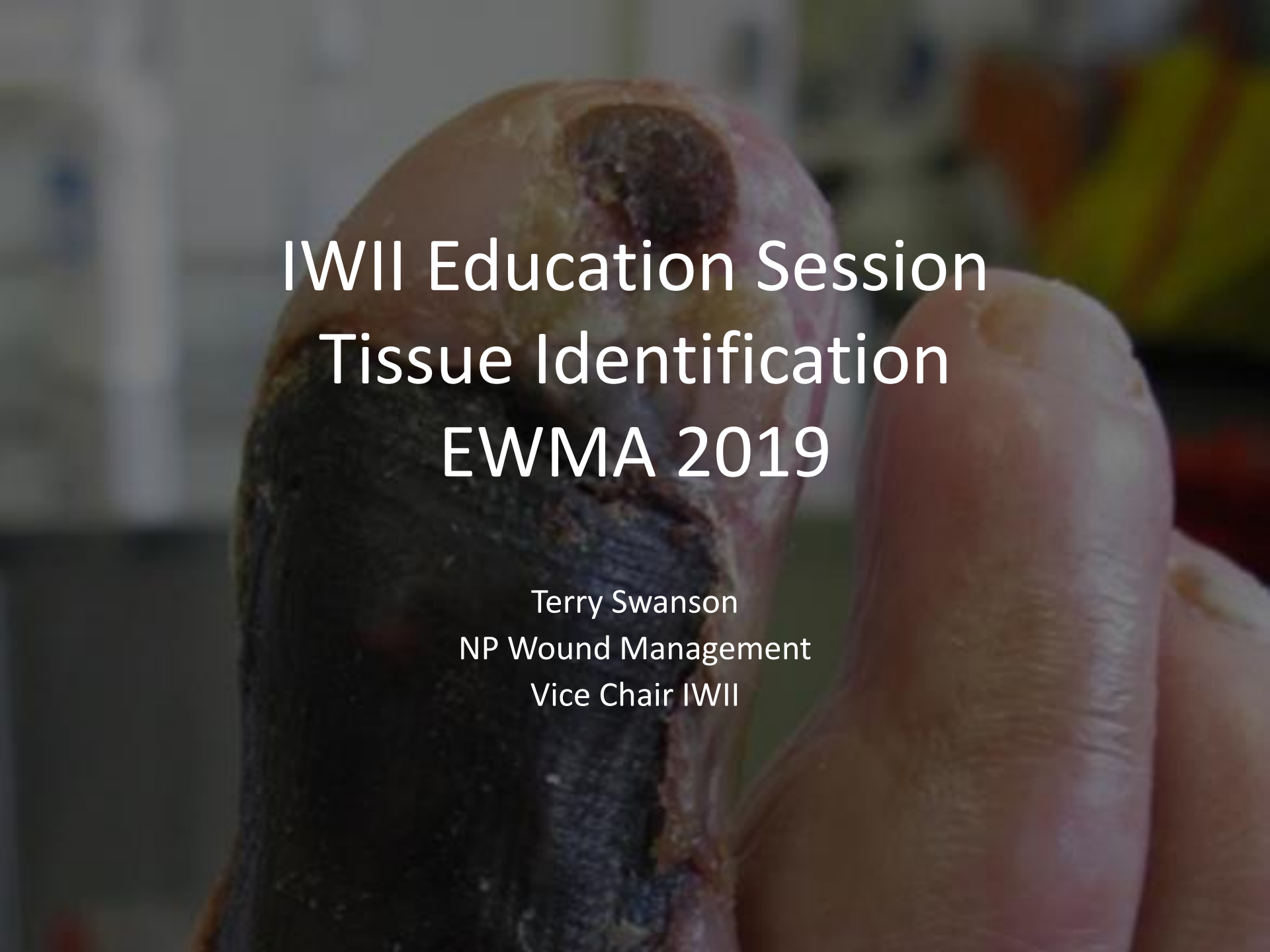


IWII Education Session Tissue Identification EWMA 2019

Terry Swanson
NP Wound Management
Vice Chair IWII

The discussion and concern

"For years it's been worrying me how best to teach about slough in the wound bed"

"Many nurses and other clinicians refer to all the yellow / creamy / greyish tissue as 'slough', yet some slough can be cleared by autolytic debridement alone, whereas others require other forms of debridement"

Tissue Types

Fascia

- Shiny, gleaming white
- Firm

Muscle

- Pink to dark red in colour, highly vascular
- Tears easily
- Frim

Bone

- Hard and milky white when healthy
- Desiccates rapidly when exposed to air

Cartilage

- Shiny, white to purple
- Covers bone at joint

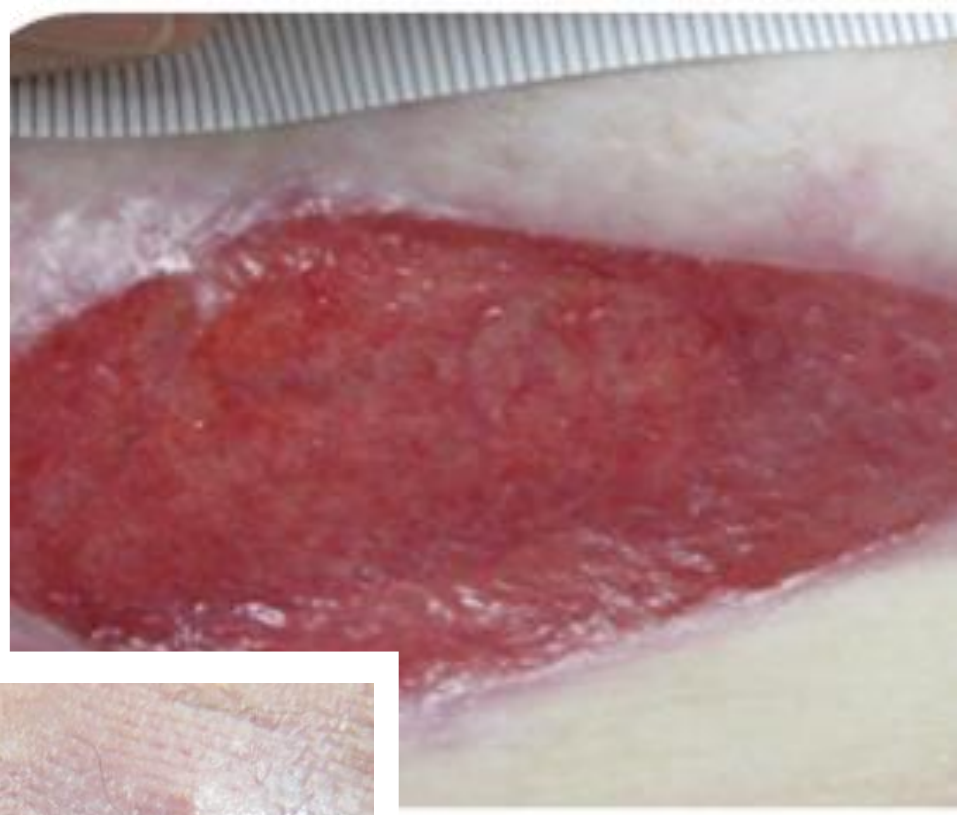
Tendon

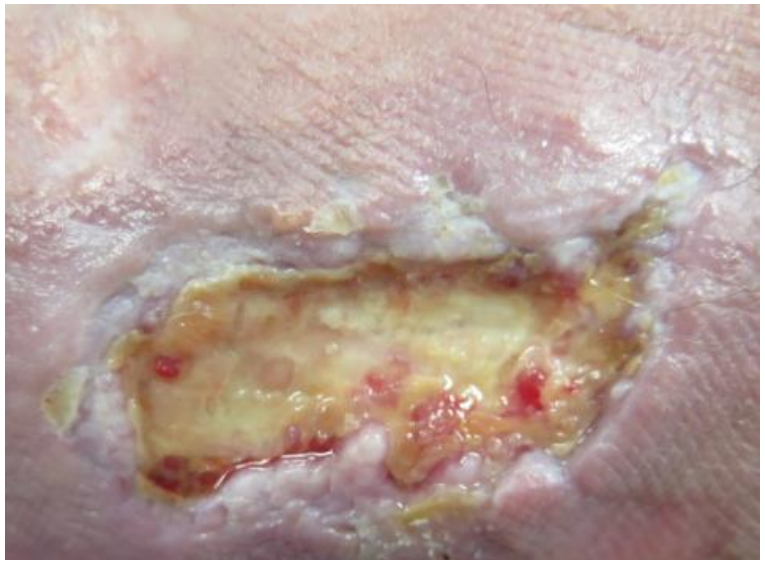
- Pearly white and smooth when healthy
- Strong, stringy, elastic
- Moving the extremity can show the movement

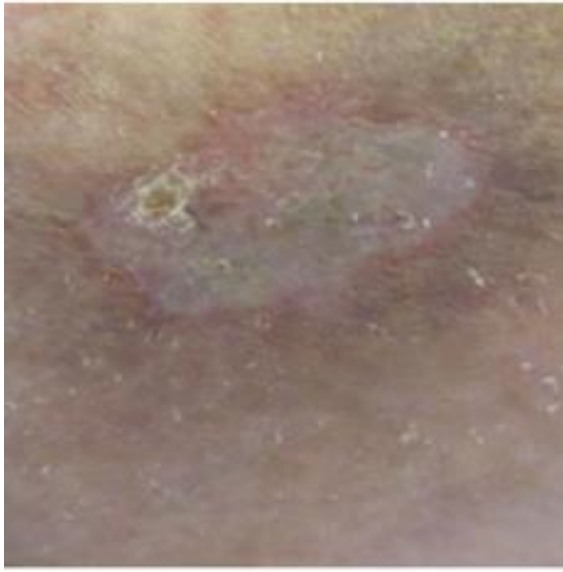
Fascia and muscle

Bone

Tendon







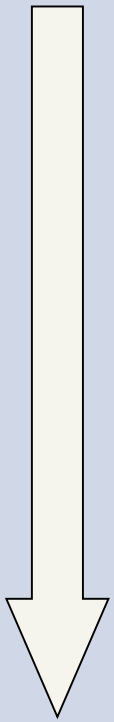
Universal Wound Colour System

Granulation = Red

- Hypergranulated
- Agranular
- Gelatinous granulation
- Pale granulation
- Beefy red
- Friable

Types of and colour of nonviable tissue

Colour	Moisture content (range)	Consistency	Adherence to wound bed
Cream/yellow	Moist or wet	'Mucinous'/slimy soft	Non-adherent
		'Gelatinous' soft	Loosely adhered
Tan/brown			Firmly adhered
Grey/blue **May be seen with topical application of some silver antimicrobial dressings**		Stringy/clumpy firm	Separating edges
Green **May be seen in the presence of Pseudomonas aeruginosa – local infection**		Fibrinous firm to hard	
Black (in addition to full-thickness NVT) **May also be seen in the presence of specific bacterial local infection**		'Leathery' hard	
	Dry and dehydrated		



White W & Asimus M, (in print) Assessment and management of non-viable tissue. Chapter 8 in Swanson T, Asimus M, McGuiness W. Wound Management for the Advanced Practitioner. PI Communications . Used with permission

Slough/ Yellow

- Devitalized tissue that can soft and moist tissue
- The colour will vary from cream, yellow and tan depending on hydration
- It can firmly attached or loose
- May be slimy, gelatinous, stringy, clumpy or fibrinous consistency
- Maybe liquefying necrosis
- Contains:
  - Proteinaceous tissue
  - Fibrin
  - Neutrophils
  - More recently associated with the biofilm or bacterial related slough

These are all yellow

But they are not all the same

Black: eschar

Black (dark) tissue may represent:

- Necrosis due to pressure damage / hypoxia
- ‘Deep tissue injury’ which has yet to evolve usually related to pressure and shear forces
- Haematoma
- Ischaemia or avascular
- A purple edge such as in Pyoderma Gangrenosum
- Devitalised – detached from its blood supply or traumatised such as a full thickness burn
- Colour will vary depending on hydration

Same colour different aetiologies

Biofilm? Slough? What is it?

Photo by R Wolcott and G Schultz

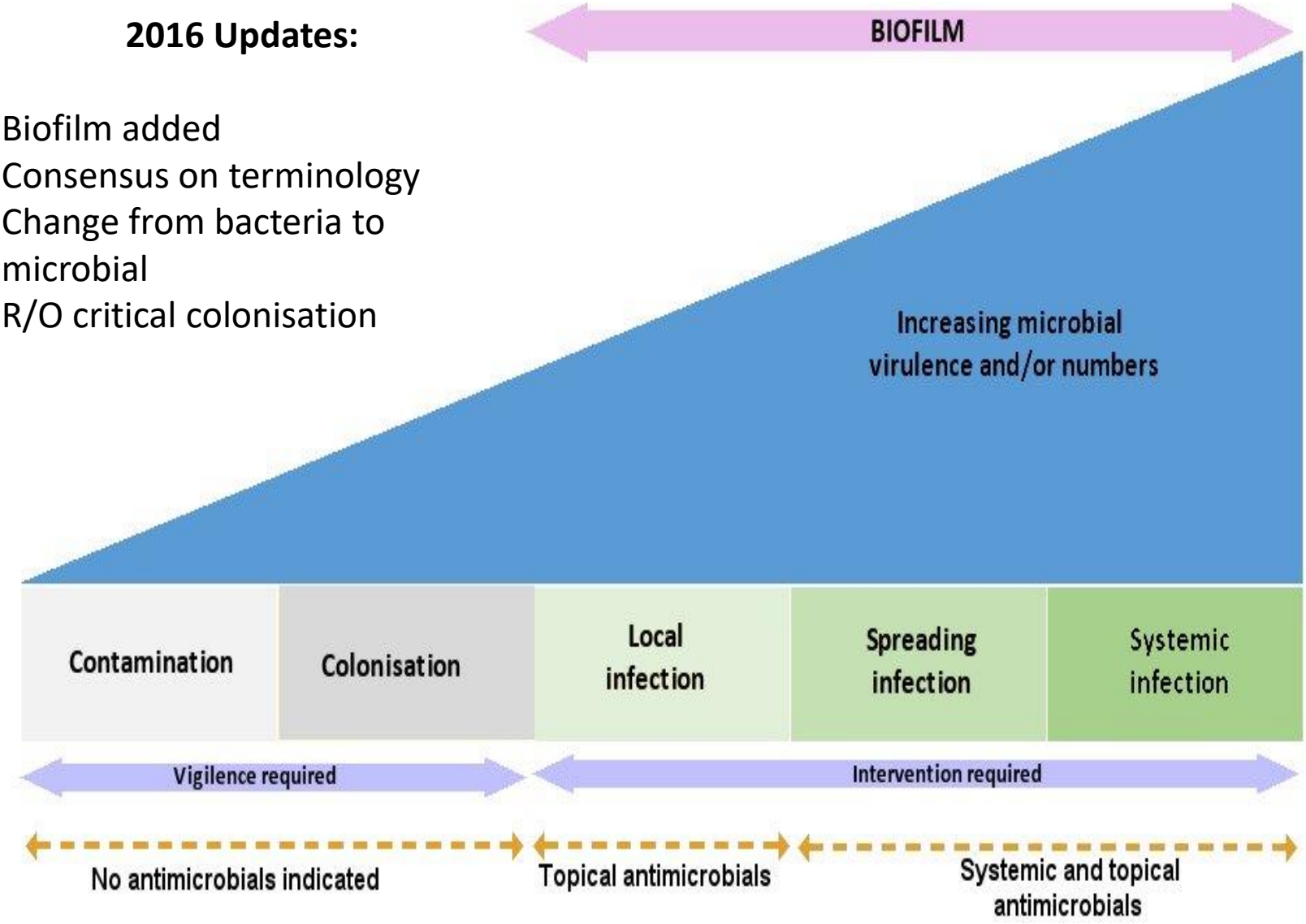
It lifts off easily and comes back by next week?

Is Biofilm only on the wound surface ?

Wound Infection Continuum

2016 Updates:

Biofilm added
Consensus on terminology
Change from bacteria to microbial
R/O critical colonisation



Wound infection continuum

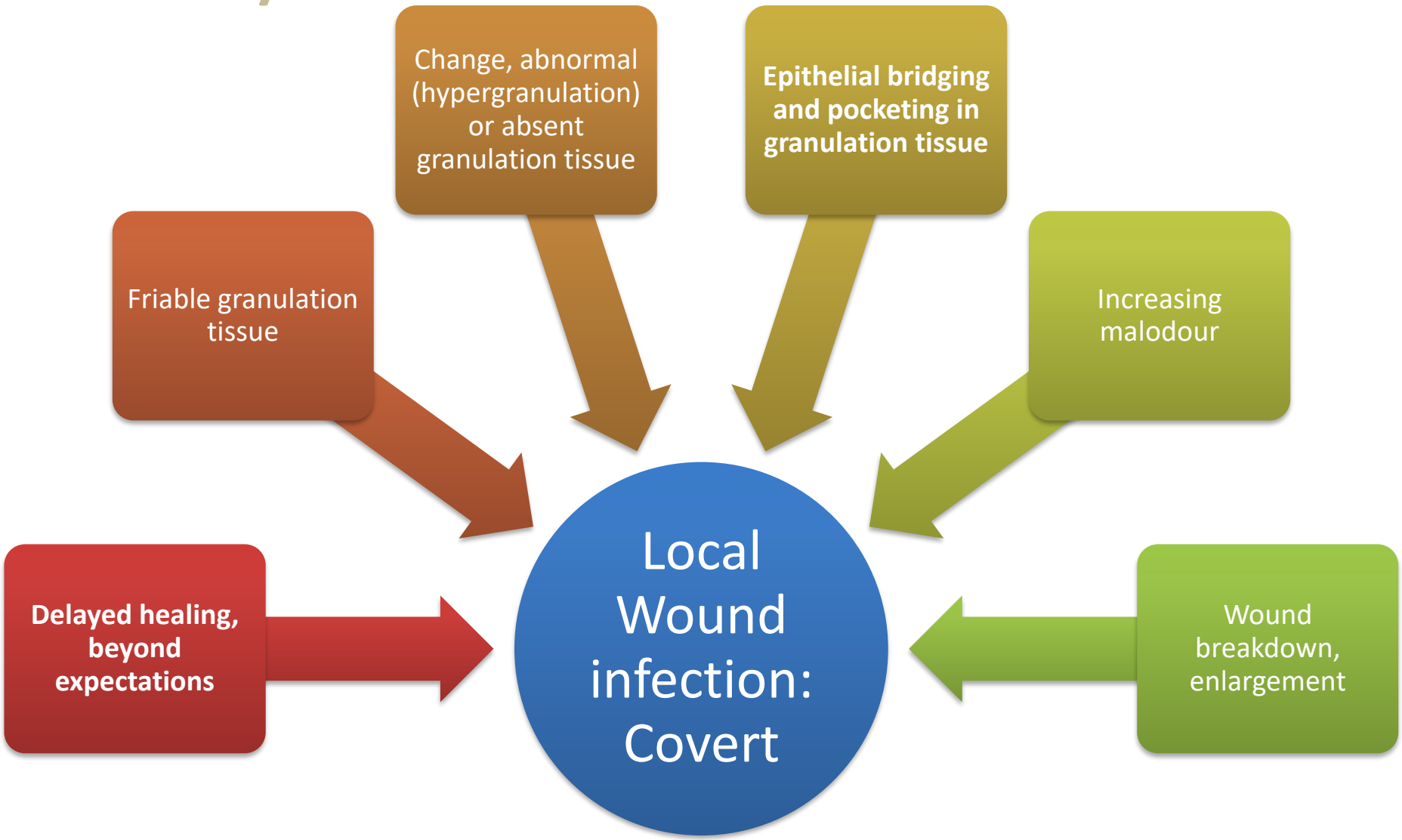
Local Infection

Covert

- Subtle signs of infection contained within the wound bed. These are commonly known as the secondary signs of infection
- Treatment is proactive
  - Therapeutic cleansing
  - Consider topical antimicrobial

Contamination	Colonisation	**Localised Infection**	Spreading infection	Systemic infection

Secondary S&S



Wound infection continuum

Local Infection

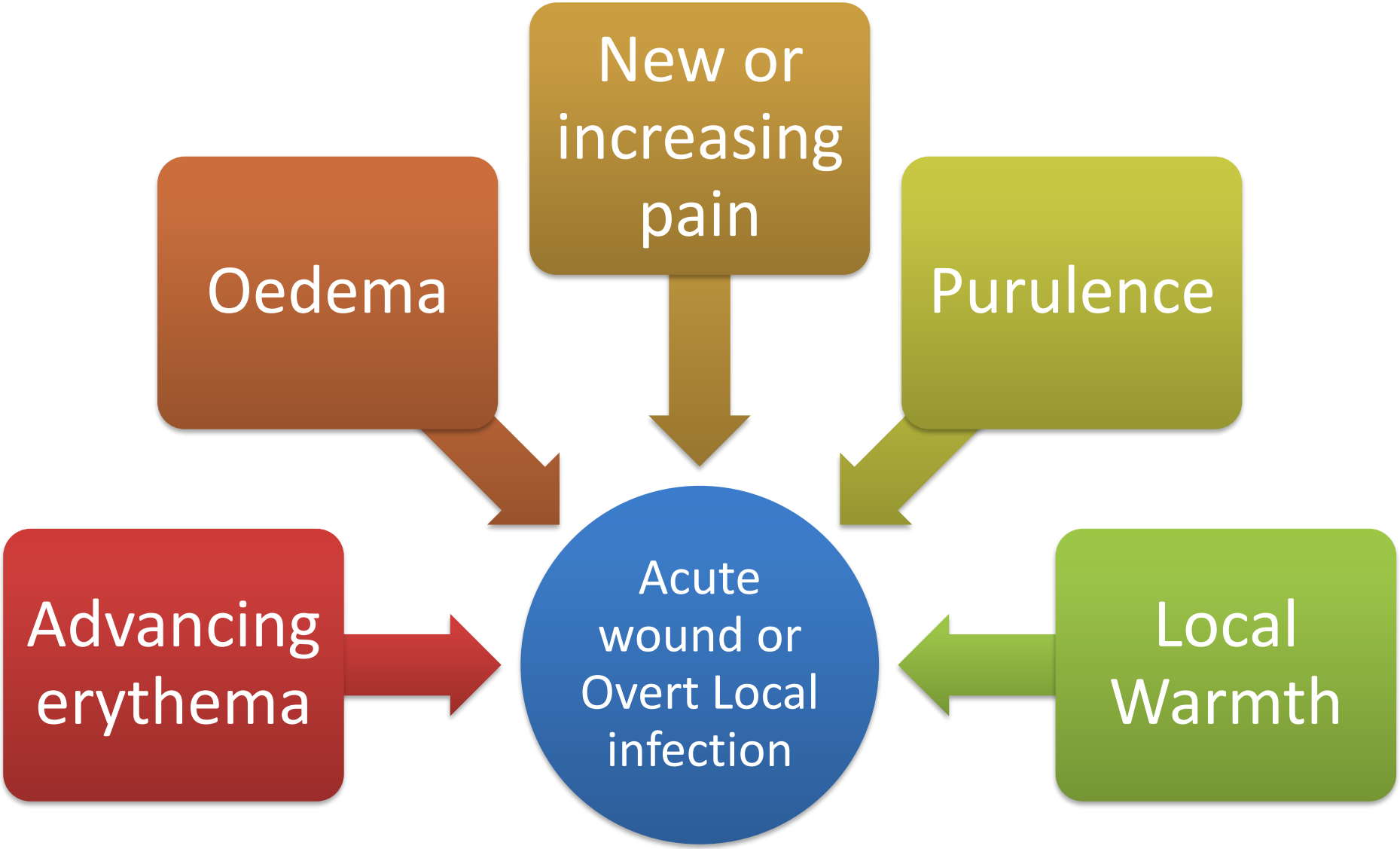
Overt

- The classic sings contained within the wound bed and immediate periwound

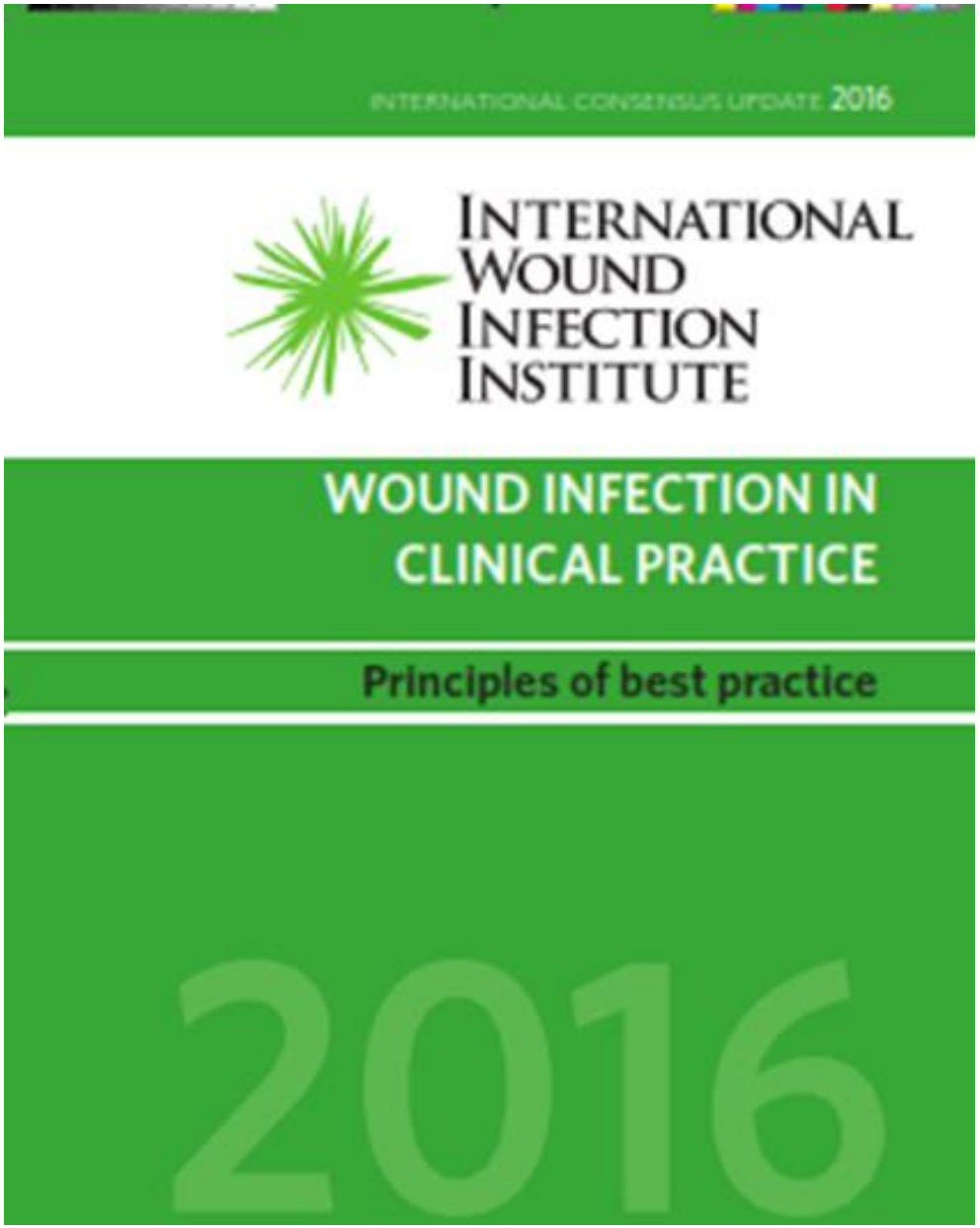
- Treatment is proactive
  - Therapeutic cleansing
  - Consider topical antimicrobial

Contamination	Colonisation	**Localised Infection**	Spreading infection	Systemic infection

Classic S&S


New or increasing pain
Oedema
Purulence
Advancing erythema
Acute wound or Overt Local infection
Local Warmth

Assessing and understanding what you are seeing



http://www.woundinfection-institute.com/2016/11/httpwww-woundinfection-institute-comwp-contentuploads201707iwii-consensus_final-2017-pdf/