

Wound Fluid Analysis and Future Science

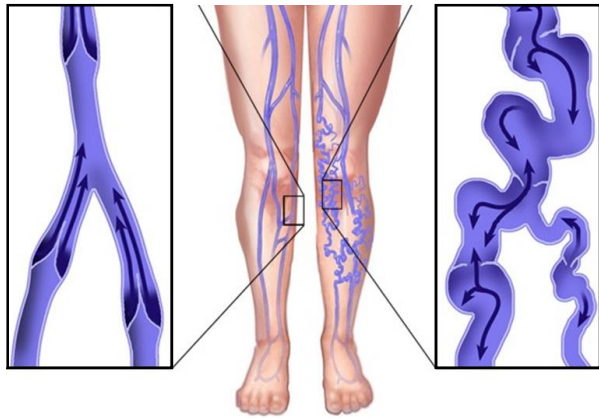
Dr Tony Parker, PhD

- Tissue Repair and Translational Physiology Program,
Institute of Health and Biomedical Innovation.
 - School of Biomedical Science,
Faculty of Health.

Basic Wound Biology

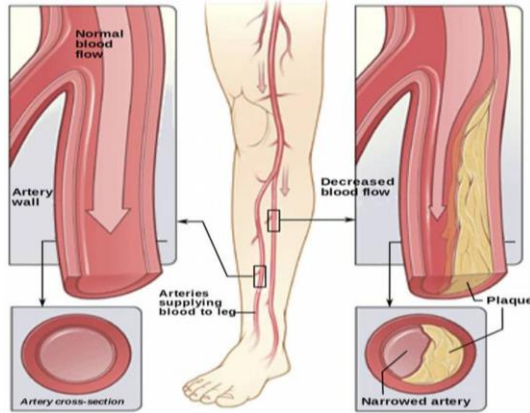
Venous ← Mixed → Arterial

- Venous insufficiency



- Vessel leakage
- Affects nutrient delivery & waste removal

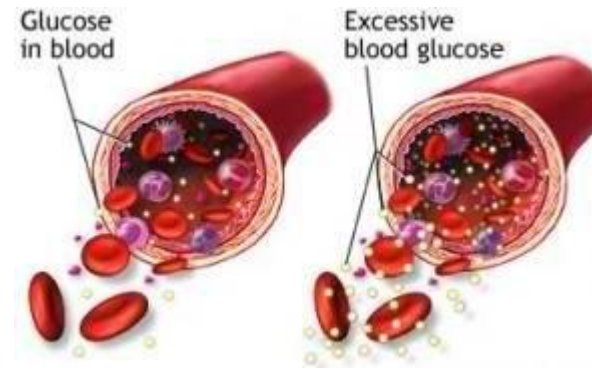
- Peripheral Arterial Disease



- Lack of blood flow
- Affects nutrient delivery & waste removal

Diabetic

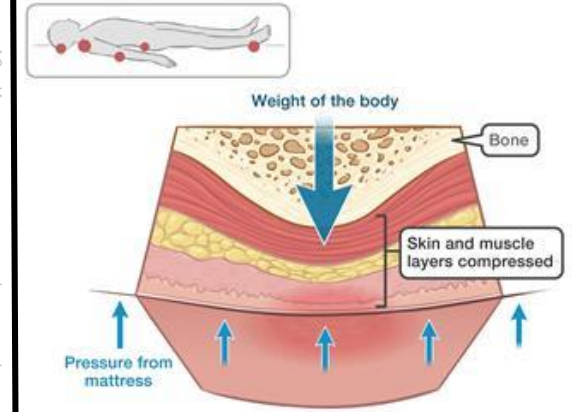
- Hyperglycemia (high blood glucose)



- Glucose sticks to proteins
- Affects normal protein function

Pressure

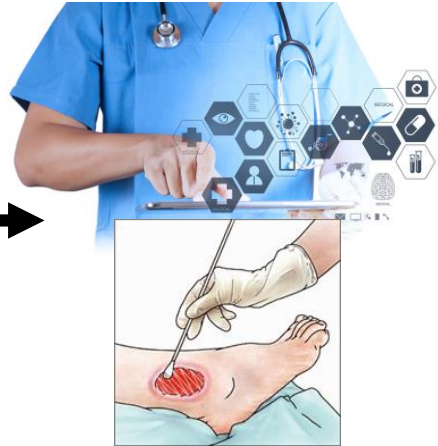
- Restricted blood flow



- Compressed blood vessels
- Affects nutrient delivery & waste removal

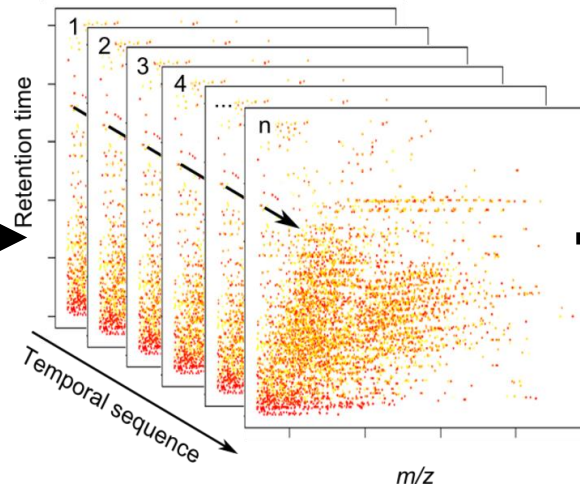
Tissue death / breakdown ↔ chronic inflammation ↔ wounds occur from inside out...sort of!

What we do...



<https://iddcr.com/wp-content/uploads/2018/01/Service-ClinicalDataManagement.jpg>

<https://cdn-images-journals.azureedge.net/nursing/SocialThumb.00152193-200711000-00012.FU1-12.jpeg>



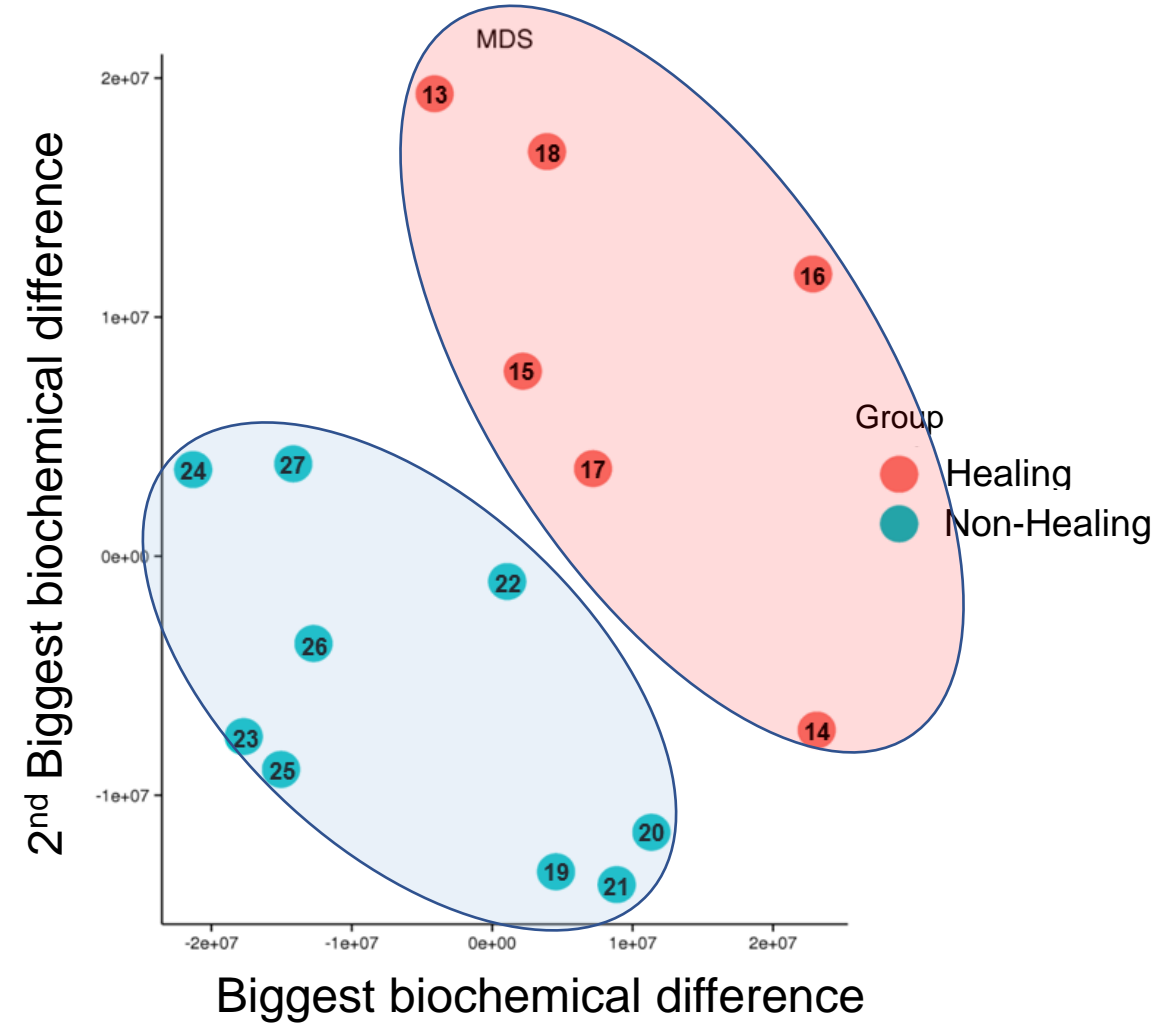
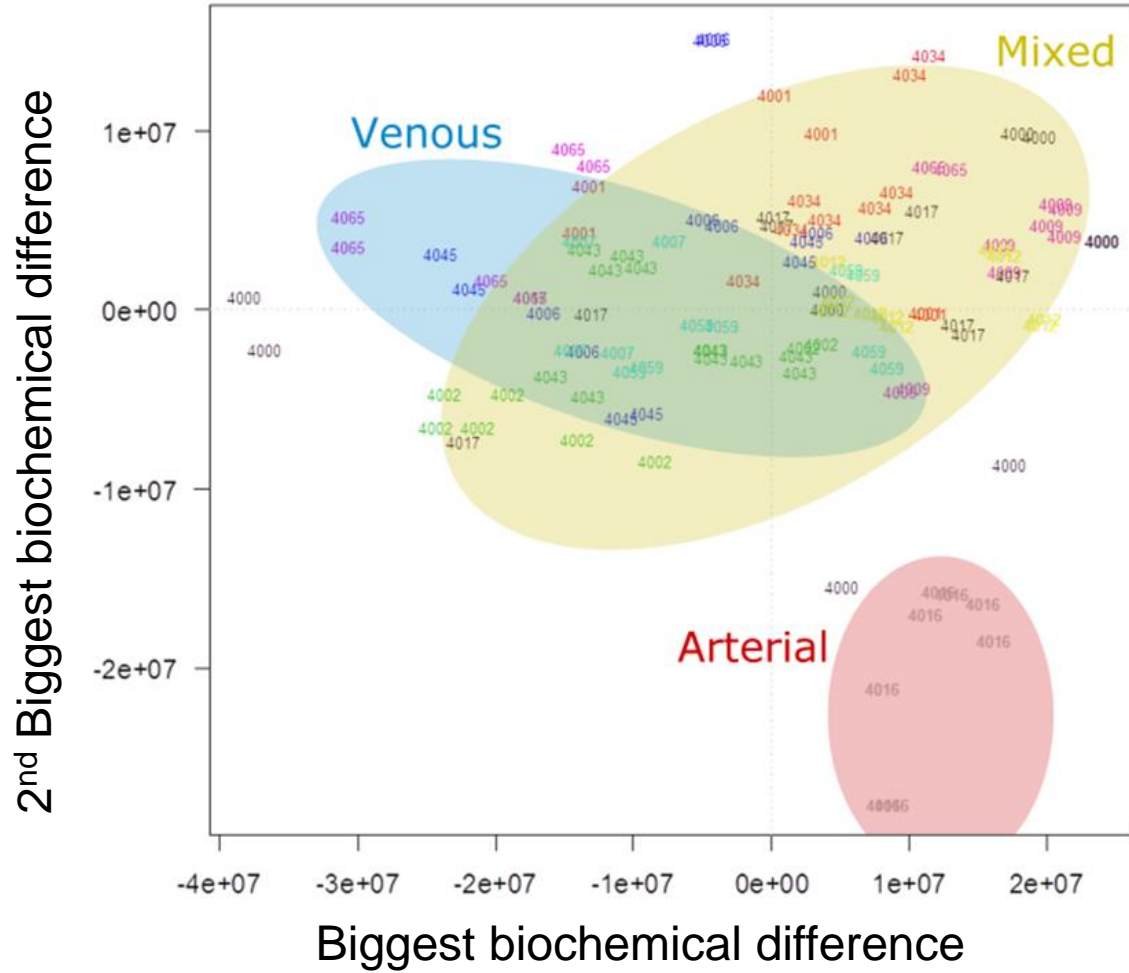
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https://latize.com/wp-content/uploads/2017/11/business_advantages_of_data_analysis.jpg

<http://clipart-library.com/img/1922126.png>

What sort of wound do you have?



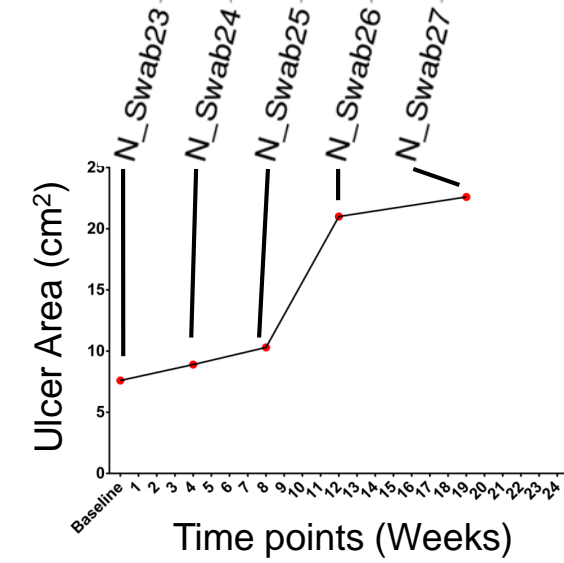
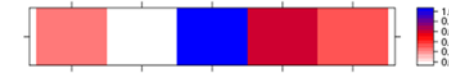
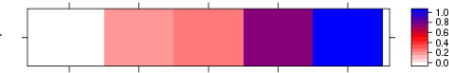
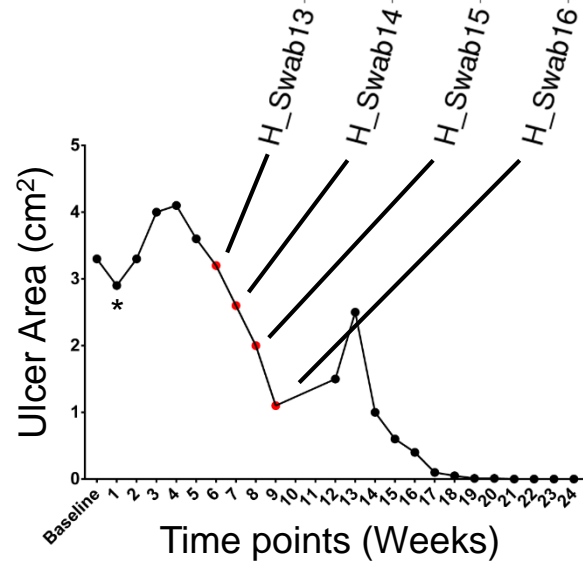
What can wound fluid composition tell us?



348 proteins



9 proteins



Thankyou for listening!

Acknowledgements

Nursing collaborators

Prof Helen Edwards (QUT)
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