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# Killing it: Can a Biofilm-Disrupting, Antimicrobial Wound Cleanser Improve Wound Healing?

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# Disclaimer



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# Background



- Antibiotic-resistant infections increasingly prevalent and major concern (civilian and military)
- Combat wounds prone to infection; may develop hard-to-treat biofilms due to delayed treatment
- A product that disrupts microbial biofilm and kills the biofilm-protected micro-organisms, while not damaging human tissue:
  - May lead to infection mitigation
  - Ability of chronic wounds to progress to healing
- Biofilm disruption → microbes lose their protection → systemic antibiotics/ topical antimicrobials can be effective





# Objectives



- BIAKŌS vs. Vashe: effectiveness in the ability to decrease biofilm formation in chronic wounds
- BIAKŌS vs. Vashe: effectiveness in the ability to decrease healing time of chronic wounds





# Methods



- Retrospective review chronic wounds treated with either Vashe or BIAKŌS wound cleanser ~4 weeks in outpatient wound ostomy clinic
- Wounds assessed by wound care team on day zero and at regular intervals/clinic appointments: physical exam + MolecuLight
- Collected age, gender, comorbidities, wound type, duration, Bates Jensen Wound Score, & MolecuLight photos pre/post each treatment



# Results



## Demographics

	Vashe (n=7)	BIAKŌS (n=7)
Average Age (years)	66	62
Male gender	7	2
Comorbidities		
Venous insufficiency	5	1
Diabetes Mellitus	1	1
Type of wound		
venous stasis ulcer	5	2
pressure ulcer	2	1
post surgical	2	4
Duration of wound (months)	5	6.8



## Outcomes

	Vashe (n=7)	BIAKŌS (n=7)
% Wound size reduction	52	70
% Bates Jensen Score reduction	10	32



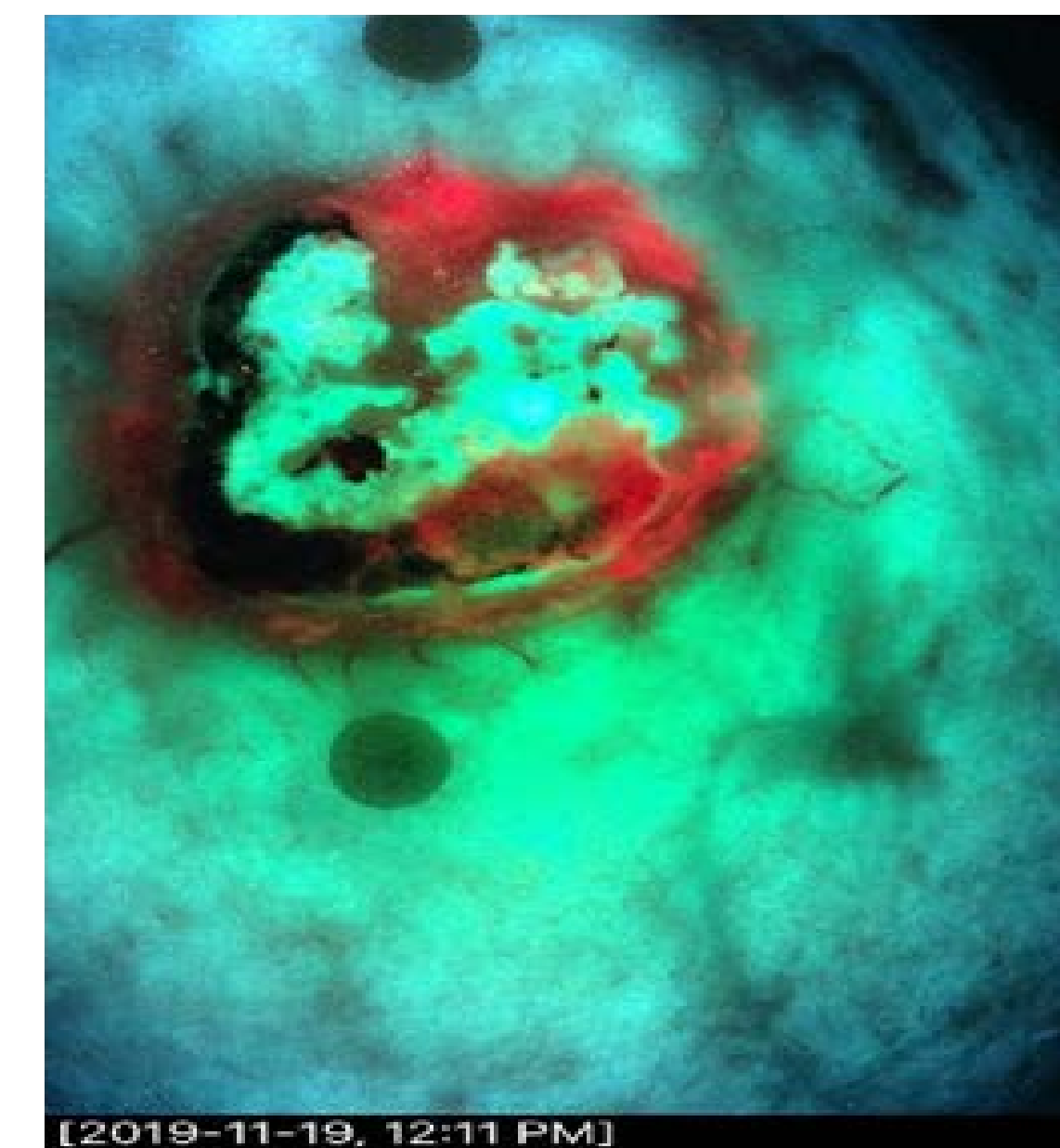
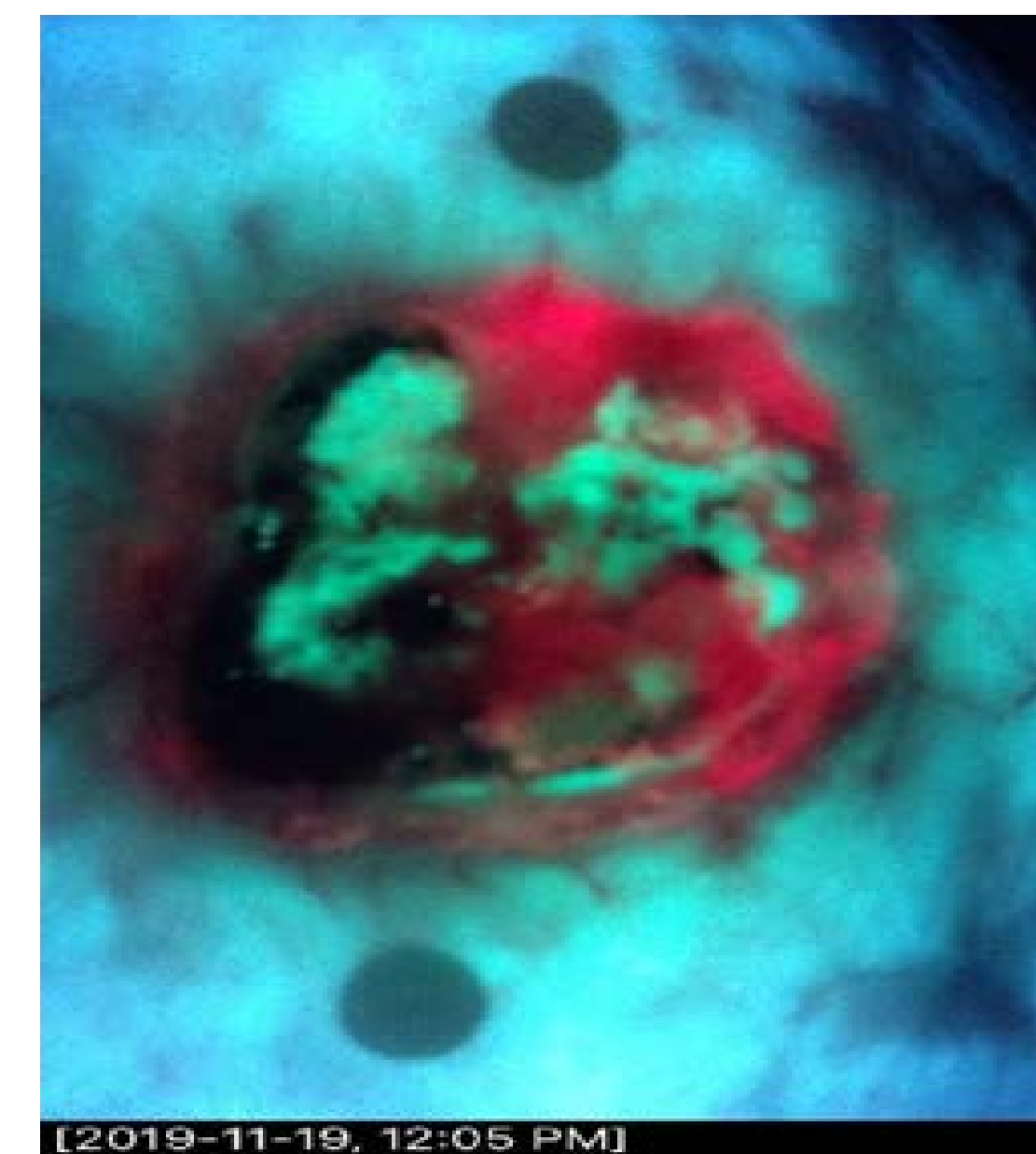
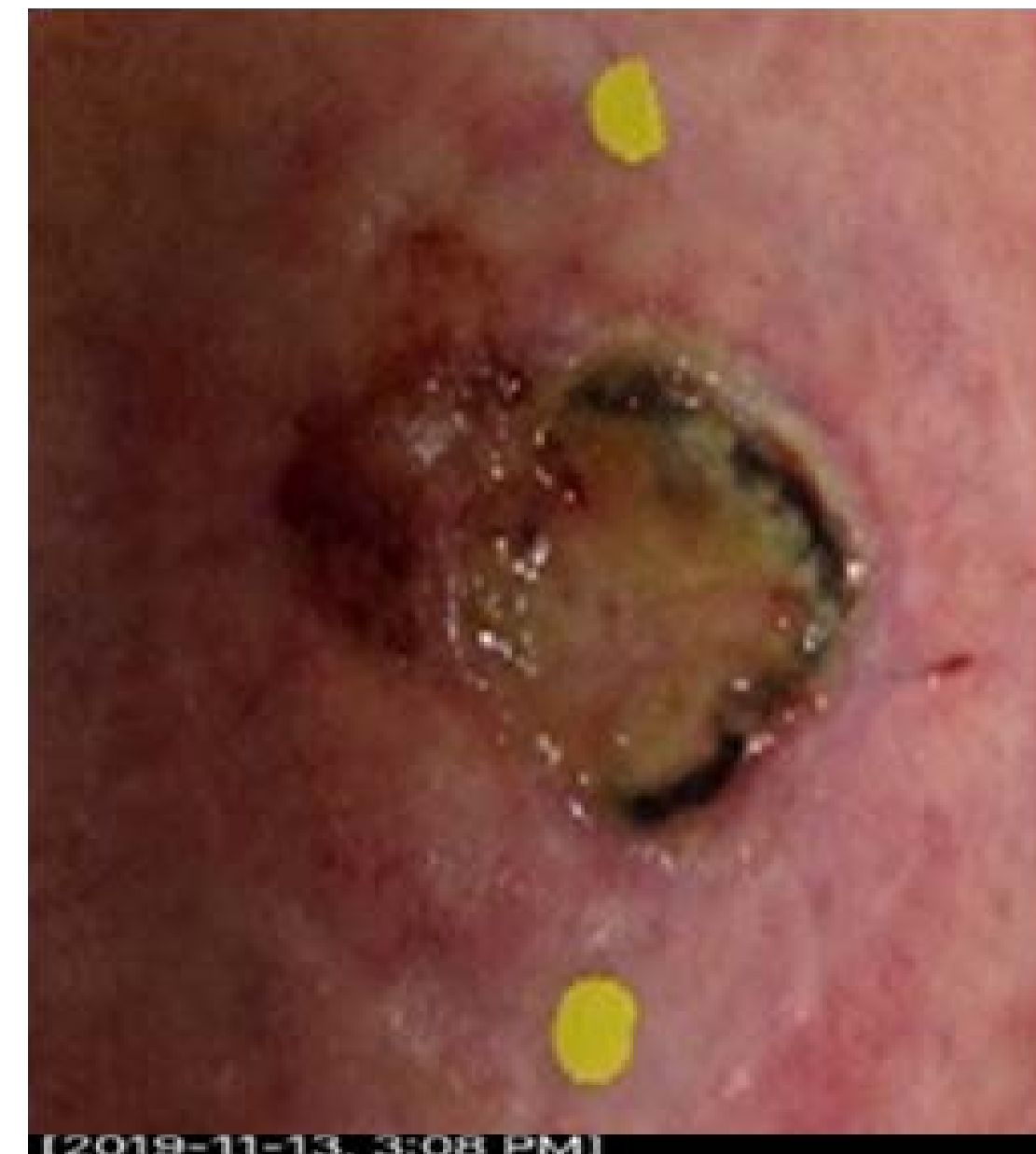
*MolecuLight iX Imaging Device*

**\*\*The MolecuLight photos demonstrated a subjectively greater reduction in biofilm luminescence in the BIAKŌS group**

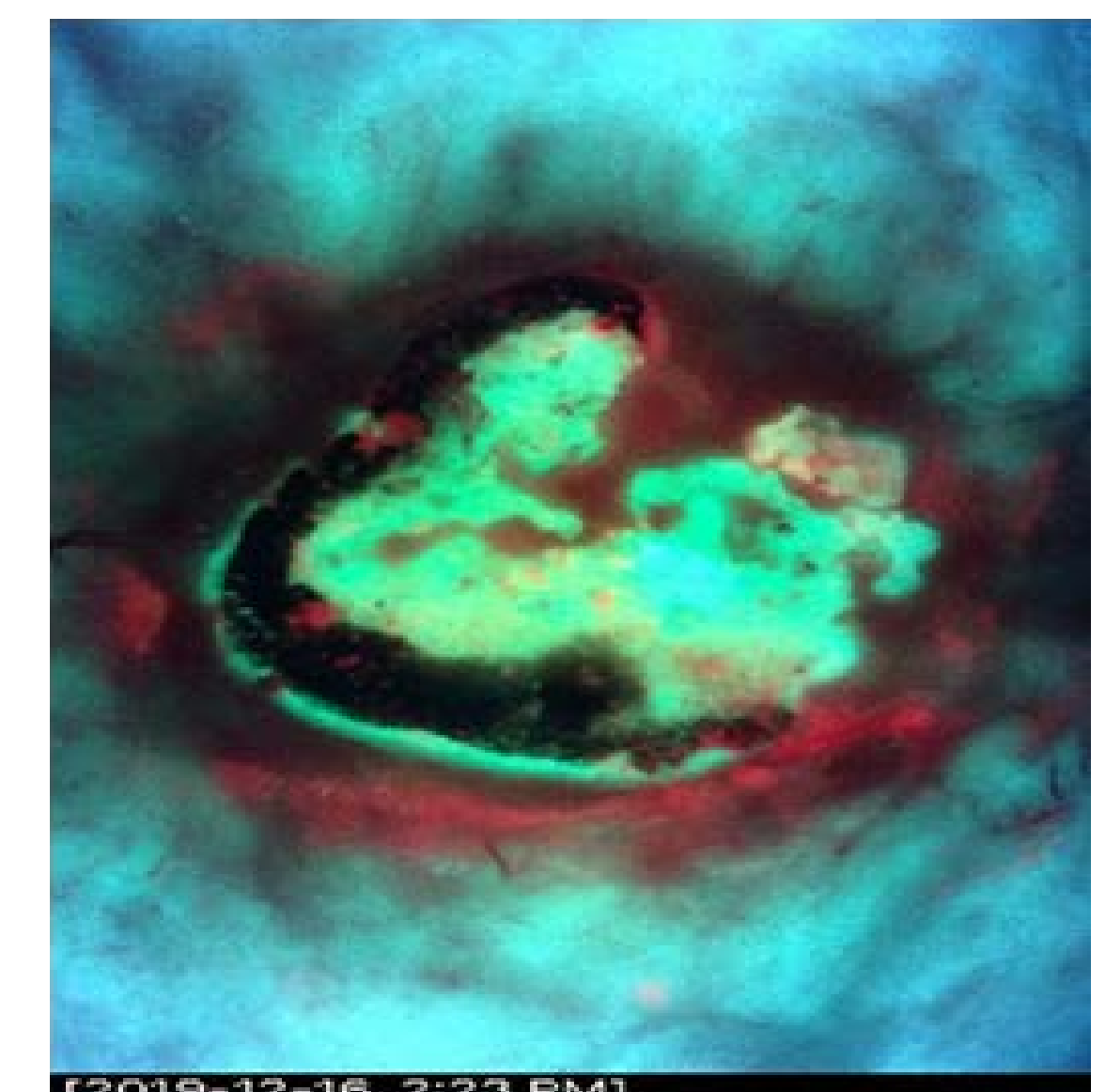
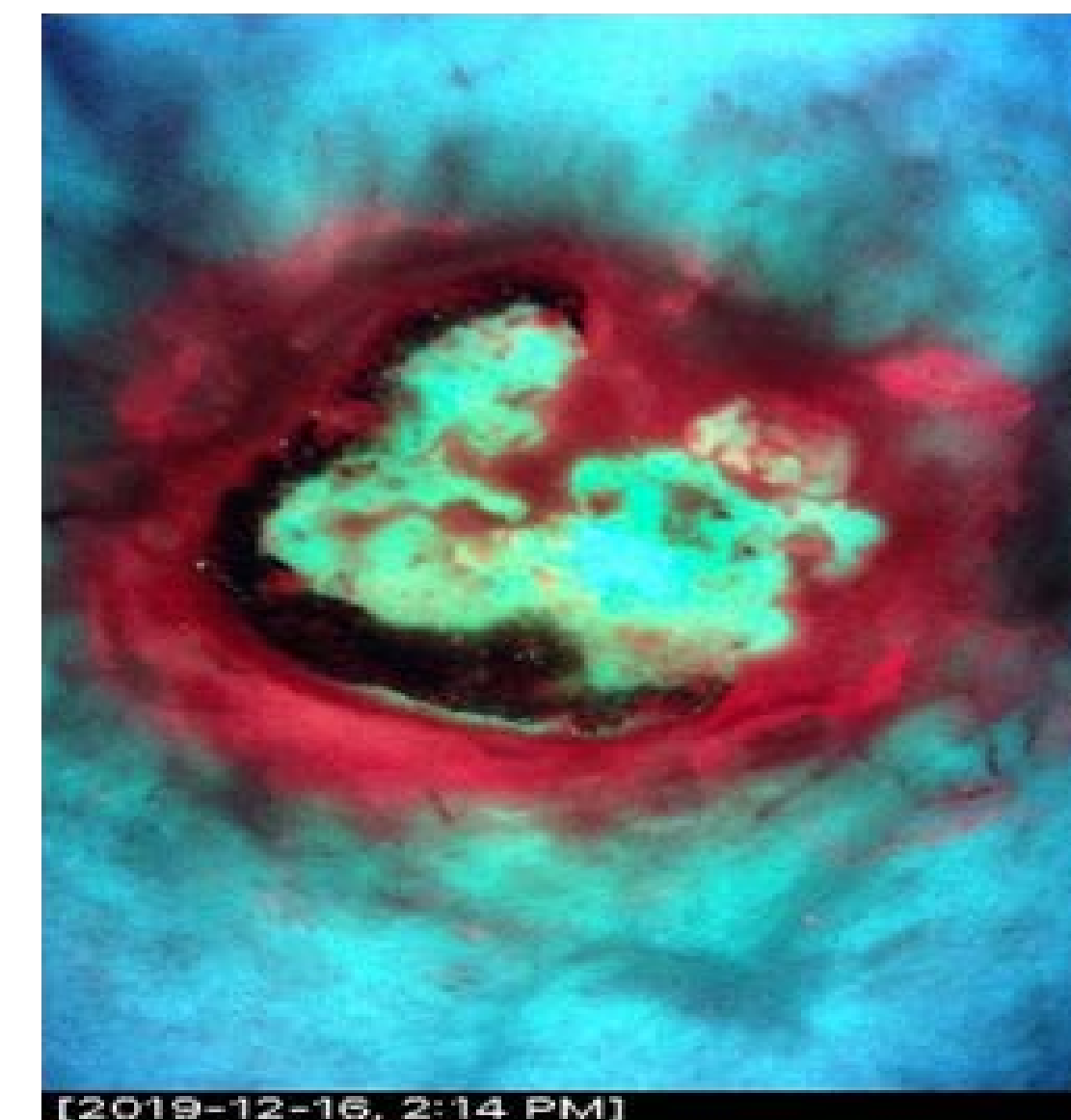
## Case 1:

70yo male SCC scalp, failed flap, prolonged wound vac and biologic dressings

### BiaKos Patient 1 @ 1<sup>st</sup> visit



### BiaKos Patient 1 @4 wks



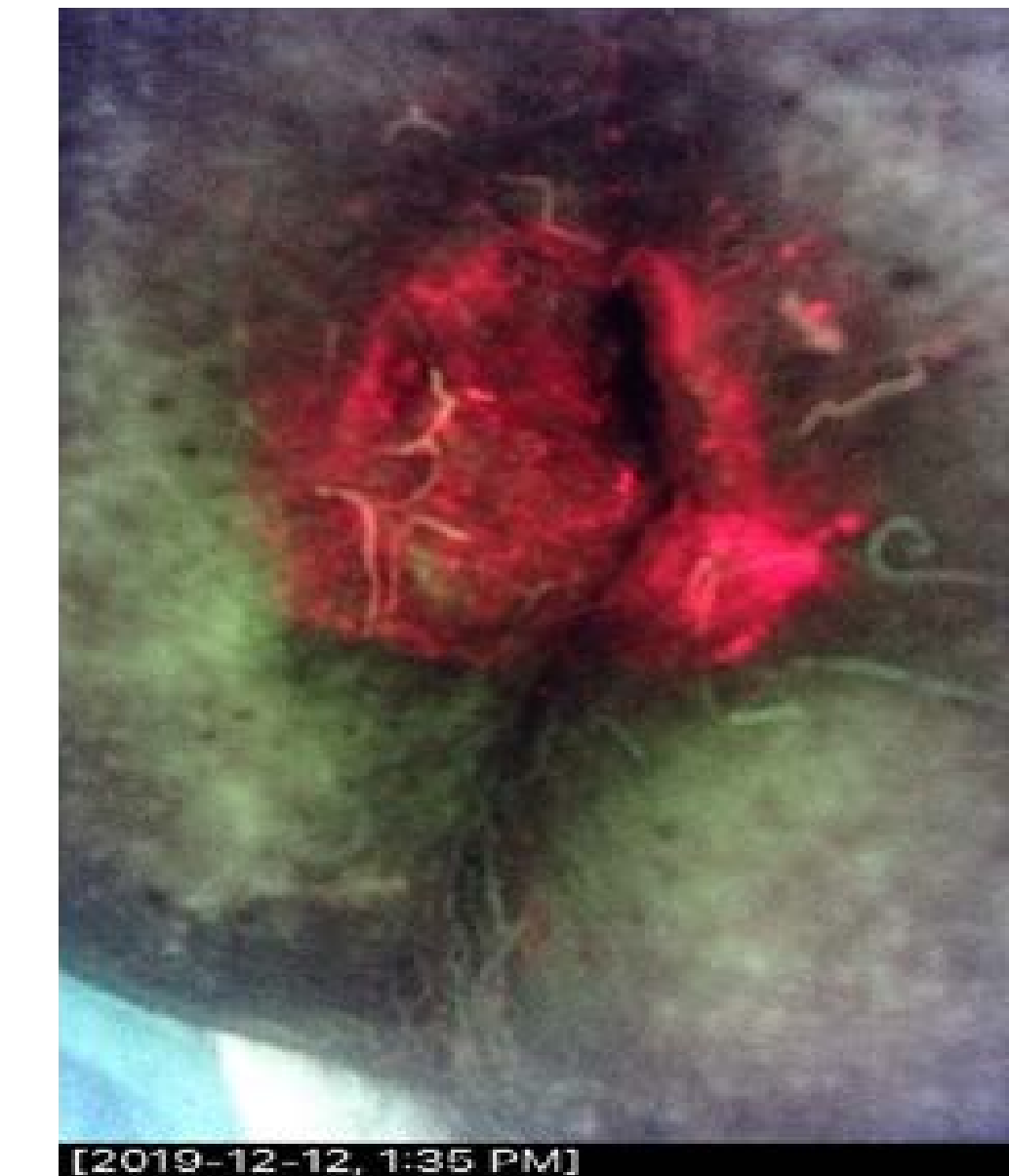
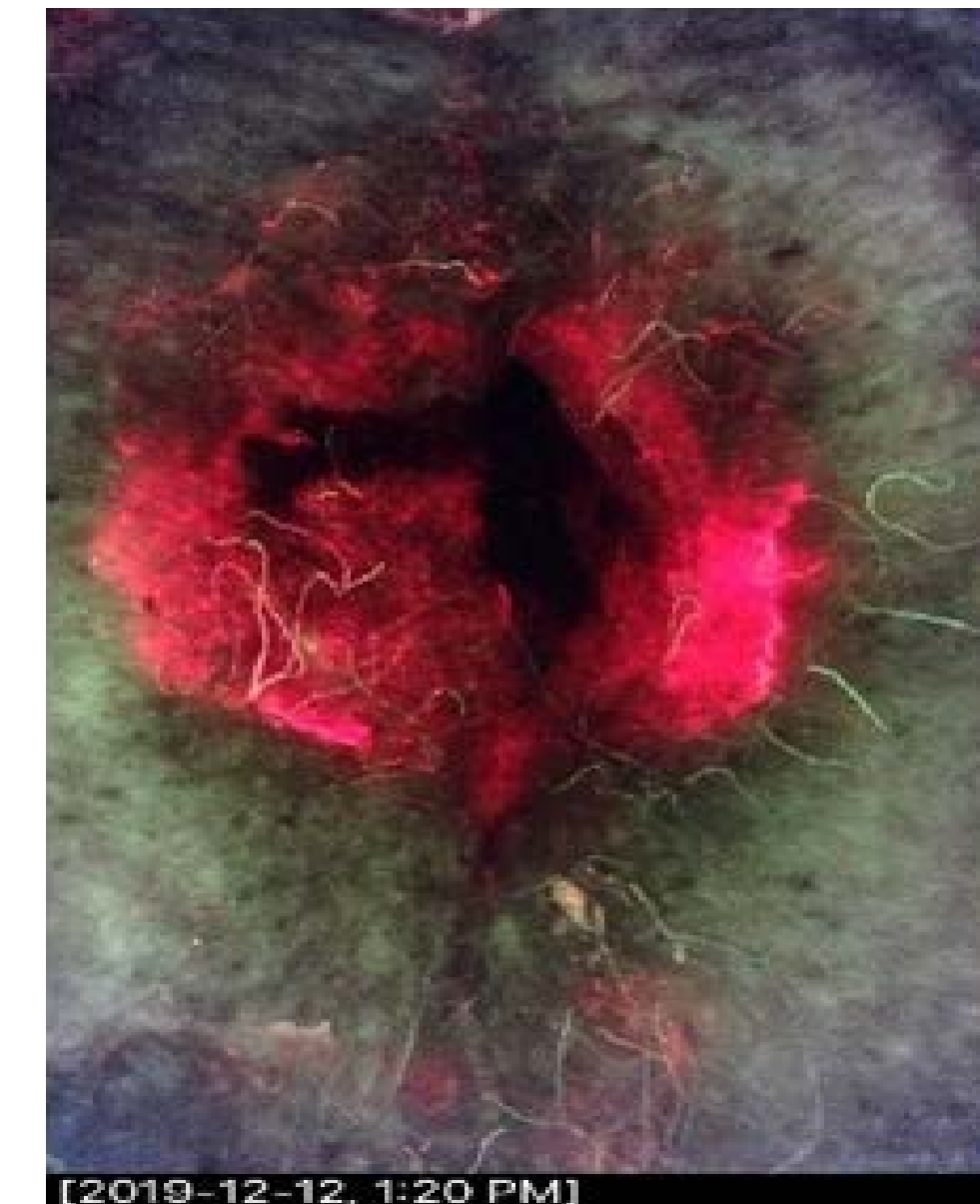


# Results

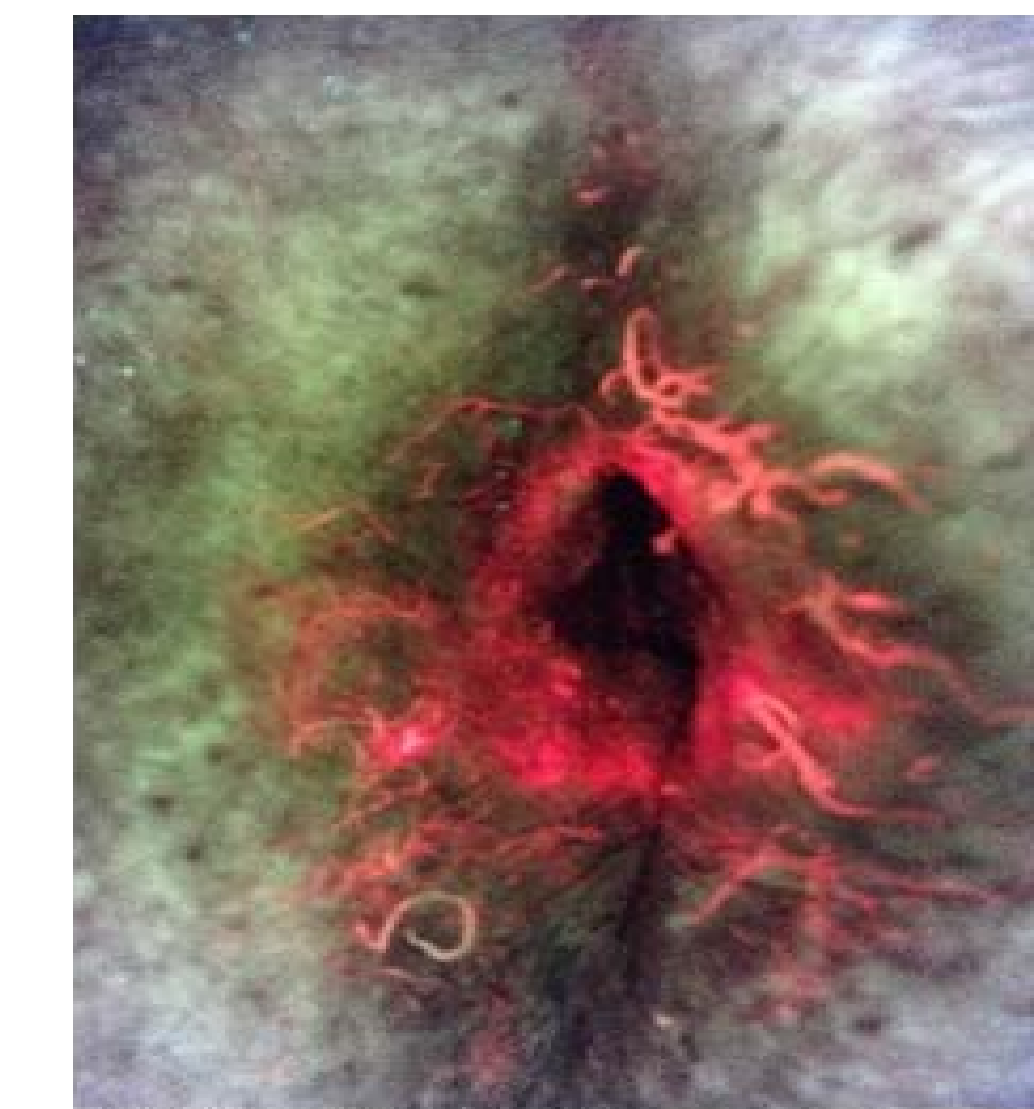
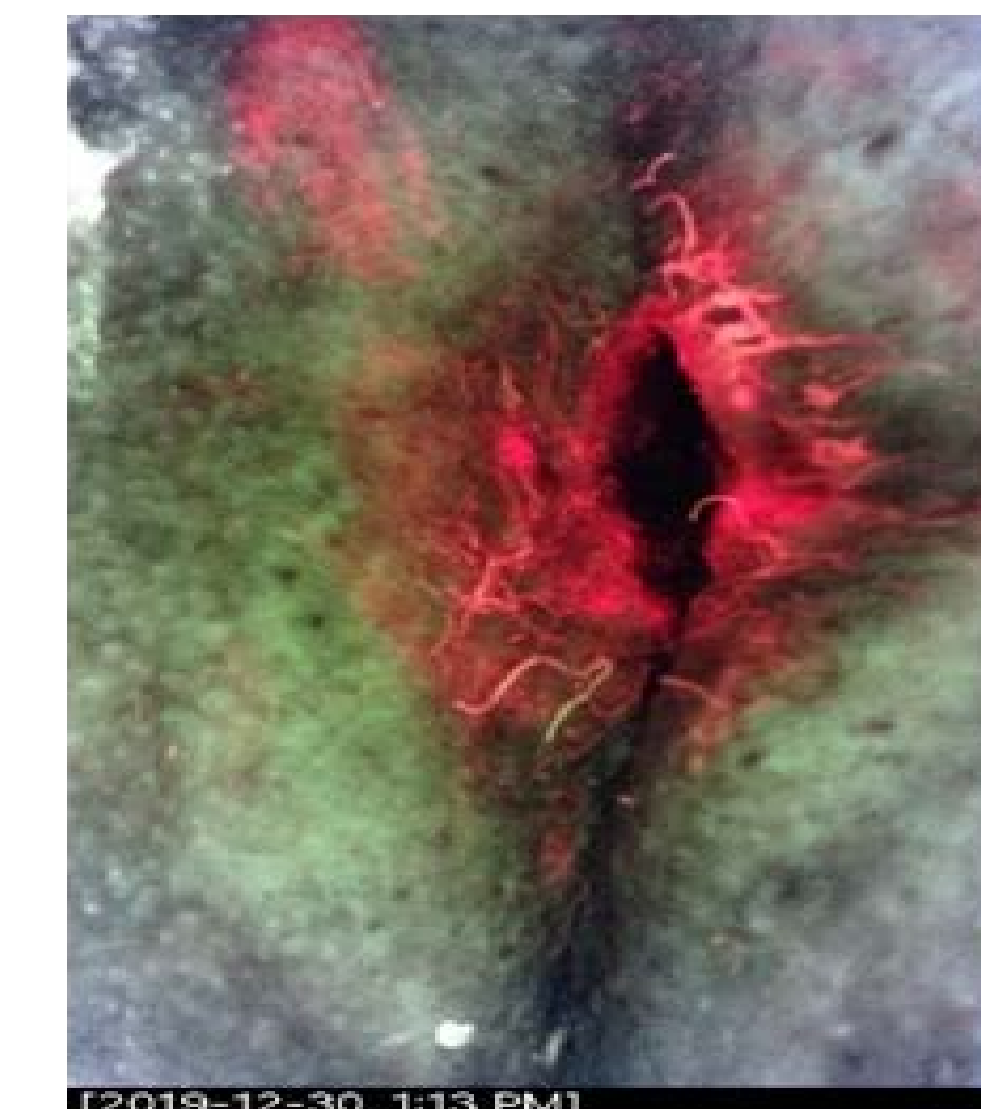
## Case 2:

54yo male MCC polytrauma,  
Stage IV pressure ulcer,  
several months duration

### Vashe Patient 3 @ 1st visit



### Vashe Patient 3 @ 4wks





# Discussion



- BIAKŌS Antimicrobial Skin and Wound Cleanser appears to reduce biofilm formation and persistence
- Leads to decreased time to wound closure and improvement in wound score
- Will continue to compile data in patients in each group to determine if this wound cleanser promotes healing of chronic wounds



# Conclusion



- This study will inform future clinical research that aims to determine the ability of the same antimicrobial product in its gel formula to:
  - reduce wound infection in acute traumatic wounds
  - decrease wound healing time
- Ultimate goal is to determine if the use of a topical antimicrobial gel applied on acute wounds can mitigate clinical incidence of sepsis by reducing wound infection rates in trauma patients





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Questions?



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