

# What do wound care technologies mean, and does it matter?

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Advanced Wound Care,  
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E·S·R·C  
ECONOMIC  
& SOCIAL  
RESEARCH  
COUNCIL

REGenableMED



# Meaning depends on context

**social,  
economic, industrial,  
ethical,  
professional,  
political,**

**...contexts of healthcare technologies**

**+ material composition and production**

# Meaning-making: identity





# *Technology identity*

“A narrative or discursive presence of the technology that delineates a particular set of attributed characteristics and performative expectancies as representative of the technology’s distinctiveness and value”.

(Ulucanlar et al, 2013)

# Technology identity – in its development and adoption space

“A spatial and temporal space transcending organisational and geographic boundaries and populated by human and non-human actors from different social worlds, where attitudes, practices, interactions and events, together with the *developing* technology’s material features, shape technology perceptions in ways that are instrumental in decisions about its *further development and use*”.

Gardner et al, Promissory identities: Sociotechnical Representations and Innovation in Regenerative Medicine, *Social Science & Medicine*, in press)



# Technology identity dimensions

## **Biography**

Plausibility

Distinctive/Novel

Visibility

Scope

## **Effectiveness**

Clinical

Cost

Affordability

## **Utility**

Clinical

Organisational

National

## **Risks**

Clinical

Financial

## **Requirements**

Financial

Use-related

Organisational

Governance

# *MySkin* – autologous TE cell therapy

For severe burns, rare; Cells on silicone sheets (later, spray)

## Identity aspects:

- Spin out 2000, succession of owners (**Biography**)
- High cost but burns centre budget freedoms (**Effectiveness**)
- Good quality clinical study difficult; clinical doubt (**Utility**)
- Competitor techniques and NHS labs (**Biography – Distinctiveness**)
- Some misuse of product (**Risk**)
- Regulatory complexity – HTA, ATMP etc (**Biography**)
- Transportation issues (**Requirements**)



Identity dimensions		ReCell	Cellution for breast recon.	A.N.Other
Biography	Plausibility	yes	??	
	Distinctiveness		some	
	Visibility			
	Scope			
Effectiveness	Clinical	NICE – more research	NICE - X	
	Cost			
	Affordability		maybe	
Utility	Clinical			
	Organisational		some	
	National			
Risks	Clinical		Intra-operative	
	Financial			
Requirements	Financial		Savings?	
	Organisational			
	Use-related			
	Governance			

# Possible wound technology identity features

- Large number of competing products
- No 'woundcareology' – professional status issues
- Animal derived materials – ethics issues
- Curative potential – evidence issues
- 'Football fields of skin' – 'a masculinist dream?' (J.Kent, 2012)
- Bio-manufacturing trends (3D bioprinting)
- 'Advanced' wound care industry – government policy
- Disease/condition targets; Product biomaterial type
- Innovation reputation (e.g. Yorkshire cluster)

MEMBER EXCLUSIVE

RESEARCH. SPOTLIGHT ON WOUND HEALING

# Developing 3D bioprinted, vascularized human skin for improved wound healing

Providing a vascular network to promote survival of cells for full-thickness wounds is crucial for proper perfusion and survival of skin-grafted tissues.



By RegMedNet on Nov 23, 2016

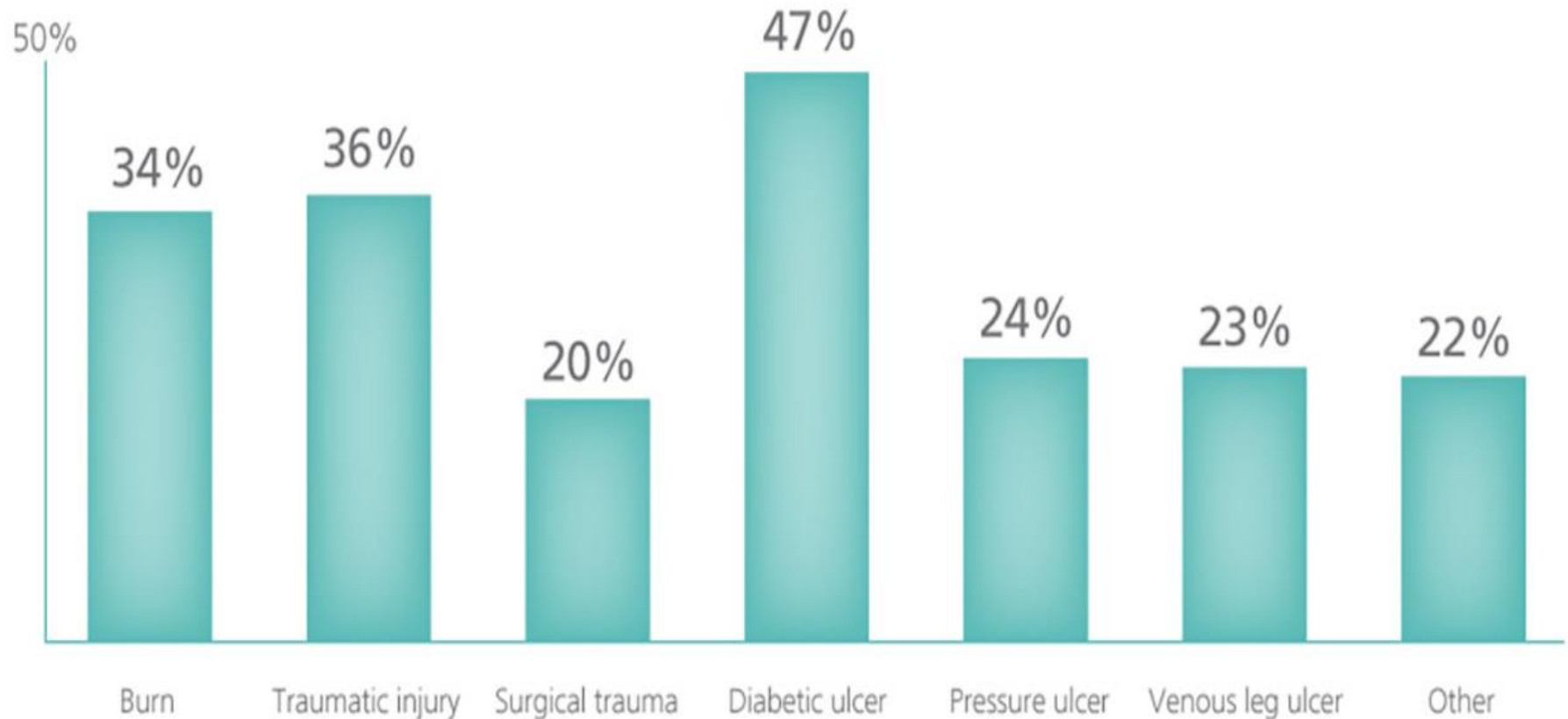
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# 3D bioprinting manufacture

‘This platform will allow for complete automation of vascularized skin fabrication in a high-throughput manner constituting the first step towards the development of a full thickness skin equivalent generated entirely with 3D printing technology.’

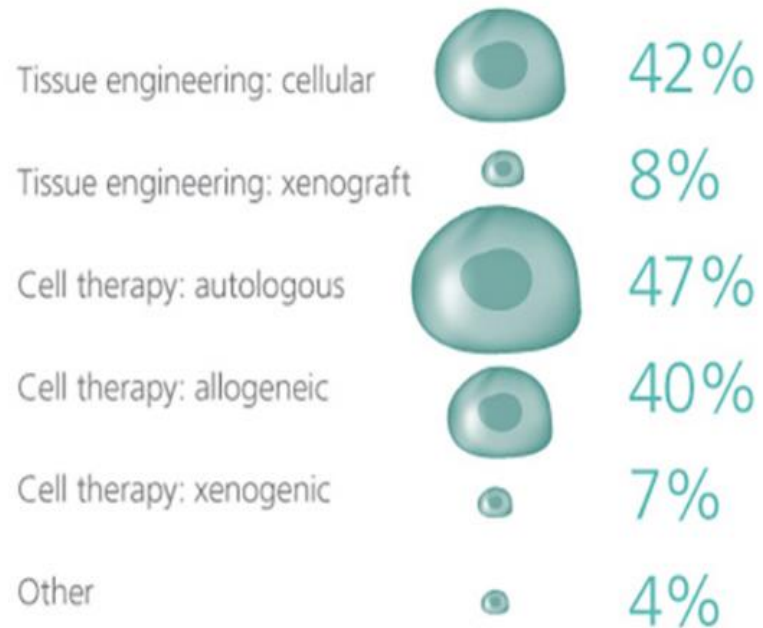
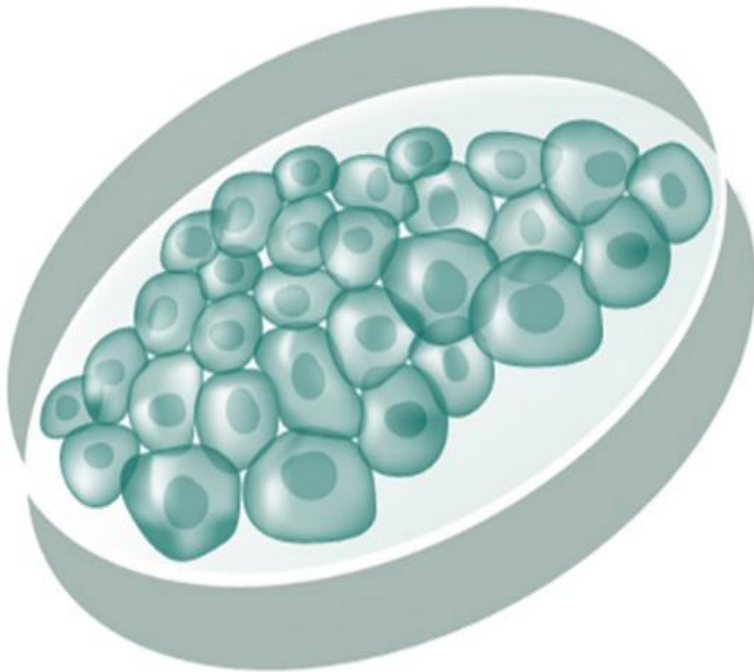
# Condition targets for regen med

What condition(s) are you researching/developing a therapy for?



# Wound healing product types R&D

What type of cell-based product are you researching/developing?



# Identity – cost effectiveness

“In some ways, cell and gene therapy, I think, will have an easier route into adoption than the other areas. The costs are well understood. They will face challenges on cost, I think but they will be straightforward challenges because they will be compared with current drugs and that will be the comparator. There will be strong evidence of patient benefit. There will be a clear view on the QALY, all of those things which, ... as we move forward into the more medical device type areas like orthopaedics **and like wound care**, I think that’s *going to become much more complex.*” (National body- UKTI)

# Identity - cost

“It is expensive but it’s good for the patients. If they can’t ...really upscale it,..(or) it is upscaled but they can’t really reduce the cost the use is limited to certain countries, basically, **apart from Western Europe you can’t really use this stuff at all. People just look at you if you tell them a piece of skin is £1,000.**”

(Birmingham Burns centre interviewee, 2015)





# Effectiveness: Promissory identity

(NICE) has already had this discussion with both myself and Catapult about reviewing methodology because nearly all of the treatments available at the moment are about management..like a chronic diabetic foot ulcer, how ...? It's not about cure. **And if you can heal a diabetic foot ulcer in a week**, as opposed to it taking 15 weeks of three treatments a week, three dressings a week and a district nurse, **then you have a very different proposition** to the one that we currently have in managing some of these areas.”



# Concluding...

Biography..  
Effectiveness...  
Utilities...  
Risk/benefit ...  
Requirements...

Identity  
formation



Trialling...Development...Evidence...  
....Adoption, patient benefit?

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