

digital Experimental Cancer Medicine Team

Changing the conduct and interpretation of clinical trials

ECMC Annual Network Meeting 2019

23 May 2019



Digital
Experimental
Cancer
Medicine
Team



MANCHESTER
INSTITUTE

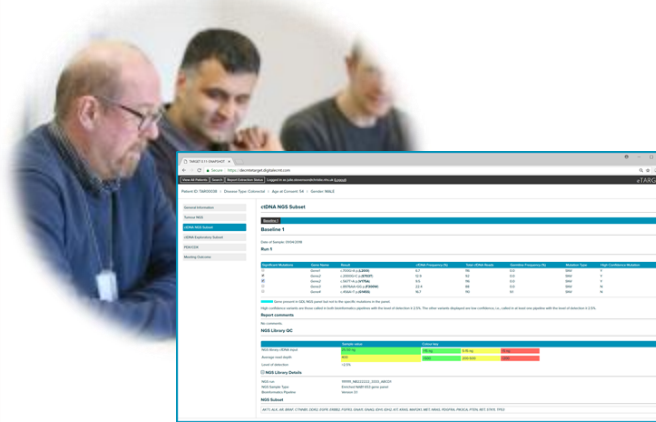
Patient Voice – empowering patients



- PROACT – first trial of its type at The Christie
- Engaging research nurses and patients
- Coming soon to more sites and more trials

Development and Evaluation of a New Technological Way of Engaging Patients and Enhancing Understanding of Drug Tolerability in Early Clinical Development: PROACT Hughes, A., Landers, D., Arkenau, HT. et al. *Adv Ther* (2016) 33: 1012. <https://doi.org/10.1007/s12325-016-0335-4>

eTARGET – decision support



- Supports decision-making
- Centralises genomic NGS data – single patient view
- Automates data extraction
- Secure cloud infrastructure
- Enables virtual meetings

eTARGET: a digital science solution to integrate clinical and genomic data for the Manchester Molecular Tumour Board (MTB). Stevenson J et al *ESMO Open* 2018;3:doi:10.1136/esmopen-2018-EACR25.580

Monitoring in the home

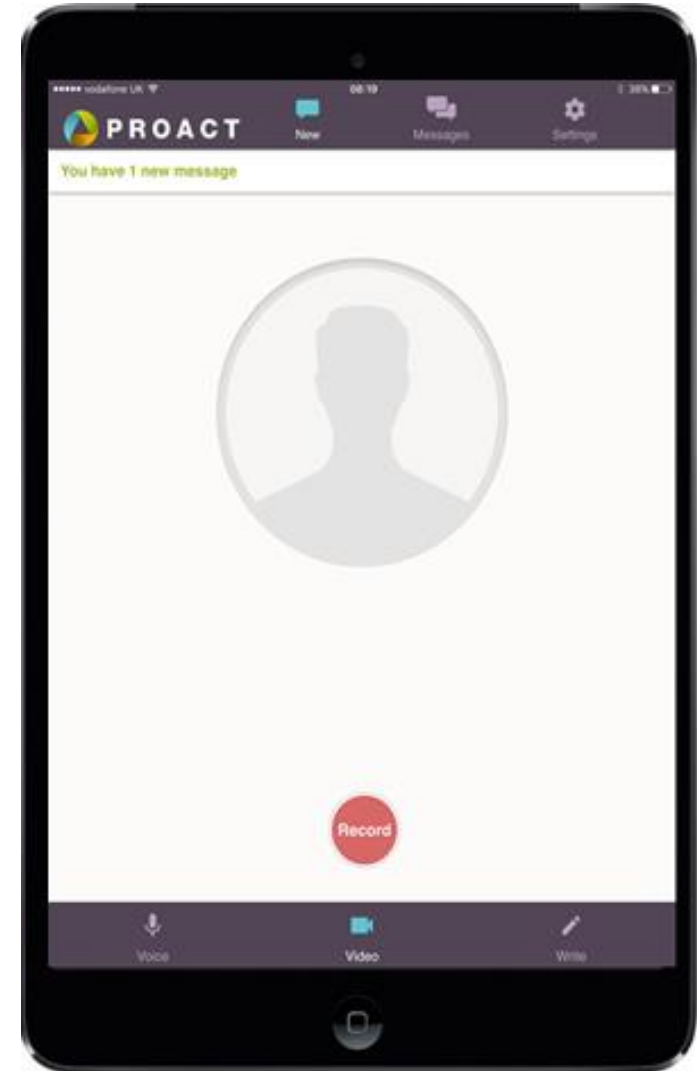
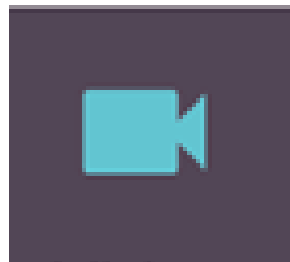
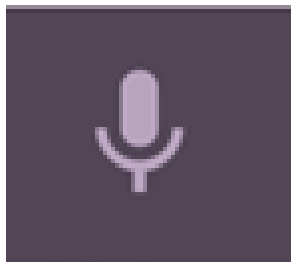


- Adapting eligibility criteria
- Clinical trial in the home
- Device to measure creatinine
- Clinical algorithm and app
- Trial protocol in review

Link: <http://abstracts.ncri.org.uk/abstract/home-renal-monitoring-for-cancer-patients-technical-assessment-and-patient-acceptability/>

PROACT – patient voice in early stage clinical trials

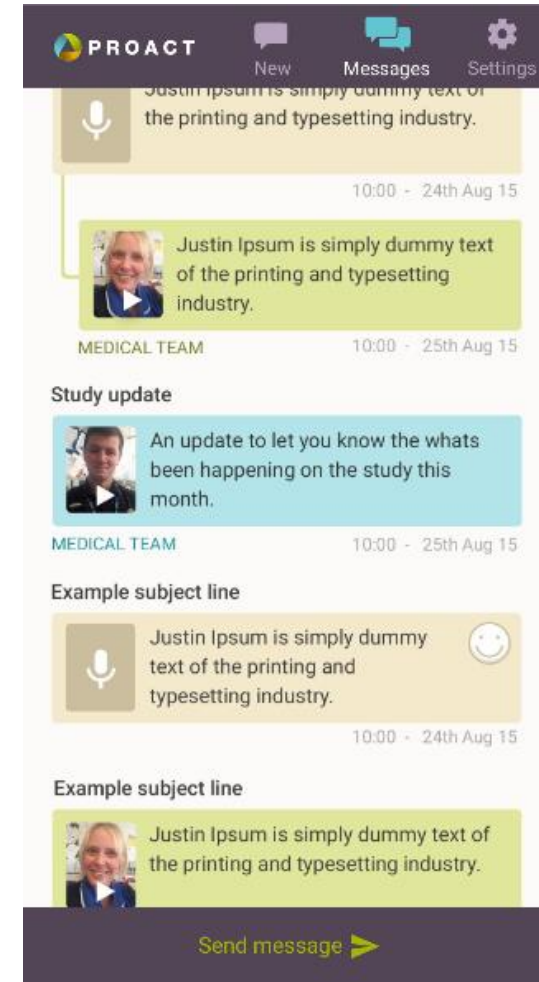
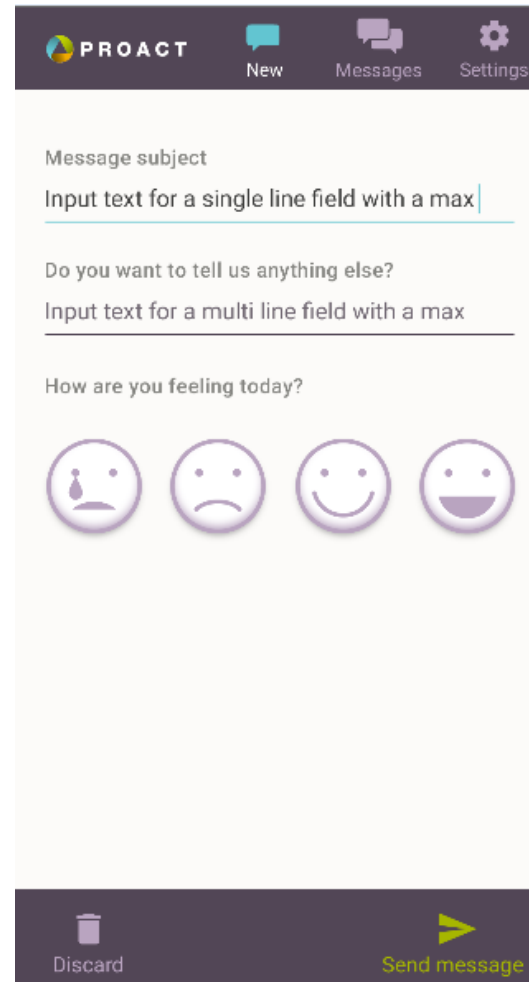
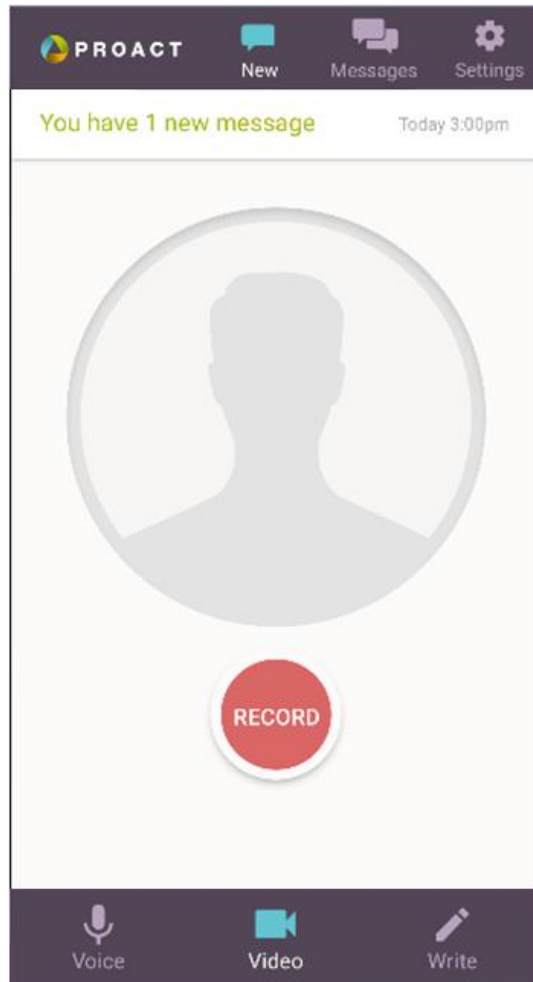
- PROACT is a application, accessed via mobile phone app or website, for secure, two-way direct communication between clinical trial patients and their medical team.
 - Gives patients an additional way to contact medical team between visits
 - Gives sponsors a means to enhance their clinical and scientific data with an understanding of what that means for the patient
 - Empowers patients to contribute to drug discovery, development process



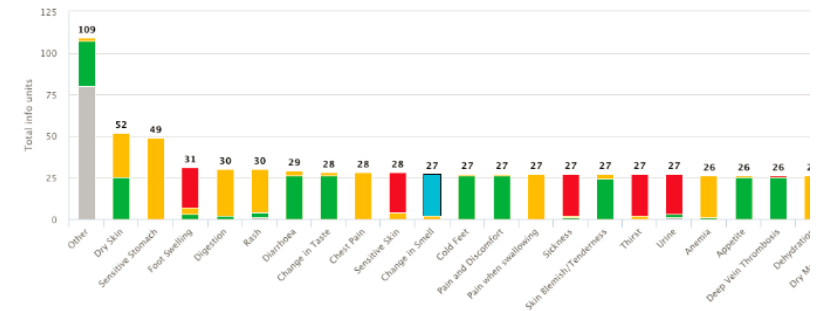
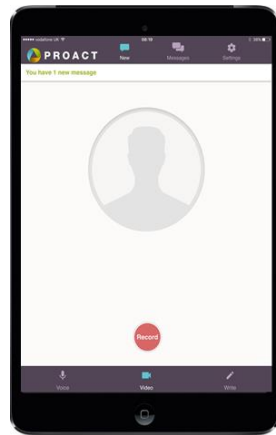
The PROACT application has a simple, clean interface



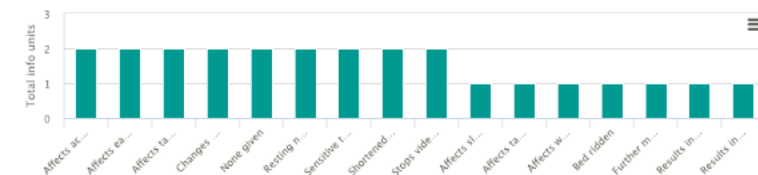
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PROACT enables collection and analysis of de-identified patient feedback



Reported Impact



PROACT data are coded for analysis using a structured dictionary



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E1234AAA: *“Experienced blotchy dry skin from Day 3 which didn’t affect my ability to function although it was distracting. It resolved after using a hydrating cream for a few days.”*

Category

Safety

Group

Rash

Topic

Dry skin

Impact on QoL

Minimal

Outcome

Resolved

Link to verbatim quote (minus patient identifying data) is retained

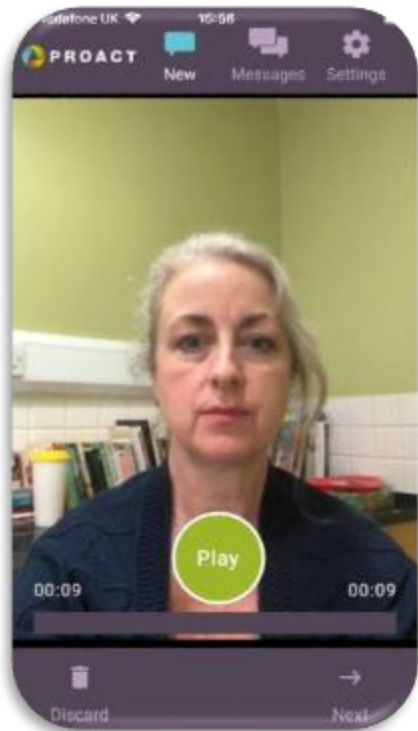
PROACT usage and feedback from patients

Research staff were able to support participants in various ways, including:

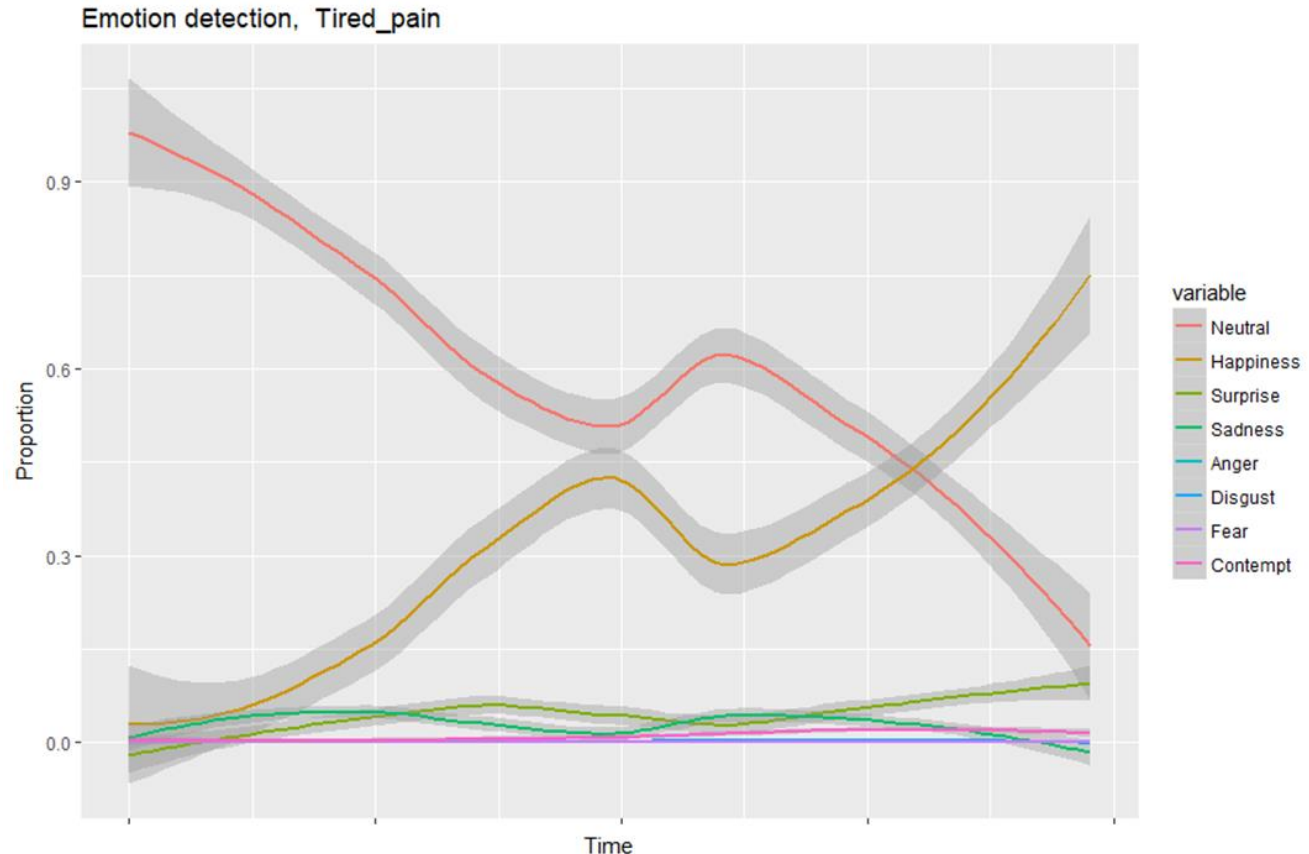
- Self-care advice for minor symptoms
- Signposting to hospital hotline where needed
- Scheduling clinic appointments
- Advice regarding influenza vaccination
- Advice regarding return to work

PROACT exploratory analytics: example negative video

Standard analytics outputs (created by analyst)					Exploratory analytics (generated by software)		
Video	Manual transcript	Topic	Impact	Outcome	Sentiment analysis	Emotion detection	Key phrase extraction
Tired_pain	Good morning, just a quick message to let you know that ... I'm alright but I'm quite tired today... umm ... I didn't have a good nights sleep because just everything hurts, but i really really don't want to take any more pain meds if at all possible. I'll have an easy day and let you know what it's like tomorrow ... bye	Generalised Pain	Affects Sleep	Changes Activity Level	0.16	Neutral 60% Happiness 31% Surprise 4% Sadness 3%	Good morning, good night sleep, quick message, Pain meds, easy day, tomorrow



Tired_pain.mp4



- The digitalECMT sits between academic research and the clinic, which enables us to engage and work directly with patients and develop our decision science and Technology Clinical Trial capabilities
- We have experience and insight in the application of digital tools in clinical trials
- Patients are co-researchers in both clinical and digital innovation and we adopt a patient-centred design approach
- PROACT is one of our first Technology Clinical Trials:
 - Provides direct, unfiltered feedback from patients
 - Engages research nurses and patients
 - Informs sponsors about what the early phase clinical trial is like from the people involved

To find out more

- Interested to know how PROACT could help your patients in early clinical trials then please contact:

Paul.oregan@digitalecmt.org (PROACT Clinical Informatician)

Jenny.royle@digitalecmt.org (PROACT PI)

- Curious about our other research areas and projects? Contact us at info@digitalecmt.org
- Or visit www.digitalecmt.org

Hear the research nurses talking about PROACT

Click on the video link - [Research Nurses video](#)

