

Nephro-oncology: Closer monitoring of renal function in early-phase trials

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Challenging current eligibility criteria

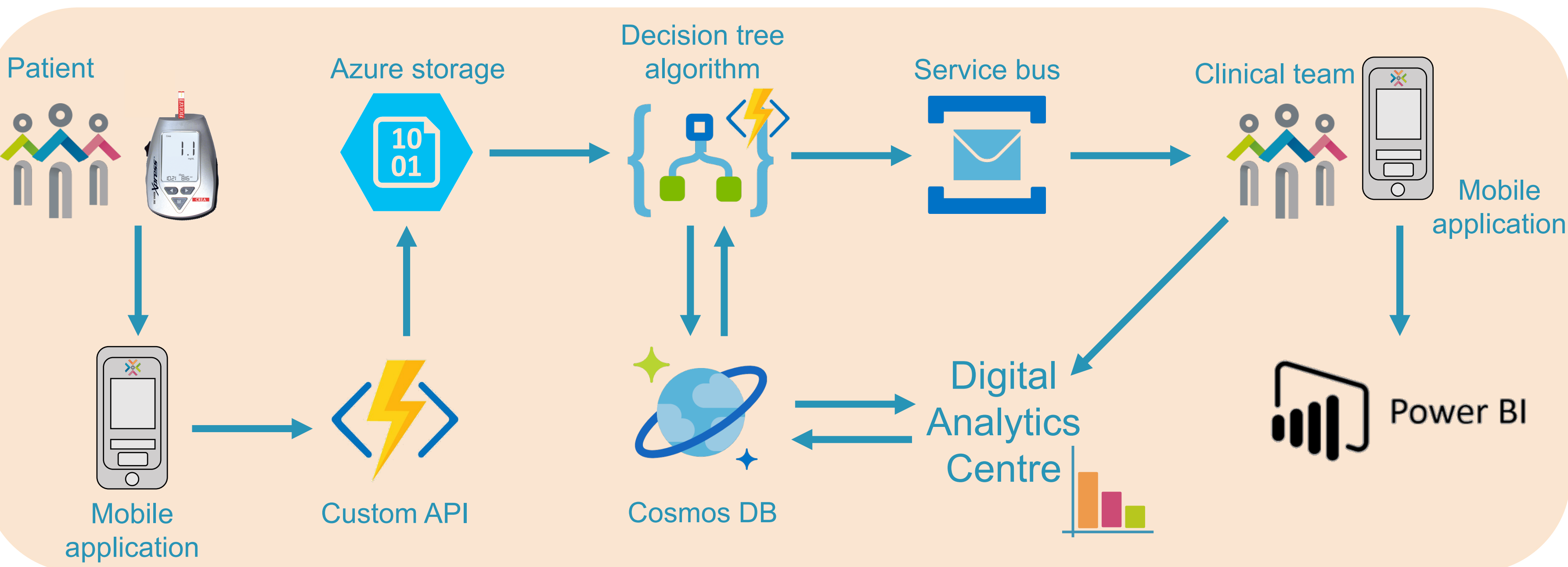


Common eligibility criteria for renal function: >50ml/min eGFR

Algorithm

- NHS England endorsed algorithm (NHS England patient safety alert: NHS/PSA/D/2014/010)
- Intended to ensure a timely and consistent approach to the detection of Acute Kidney Injury (AKI)
- Based on serum creatinine changes with time
- Implemented using Microsoft LogicApps
- Triggered by a new measurement
- Processes readings and able to send alerts in real-time

System



Engaging patients, Driving decisions

Objective



To determine if patients with controlled renal dysfunction can participate in early clinical trials

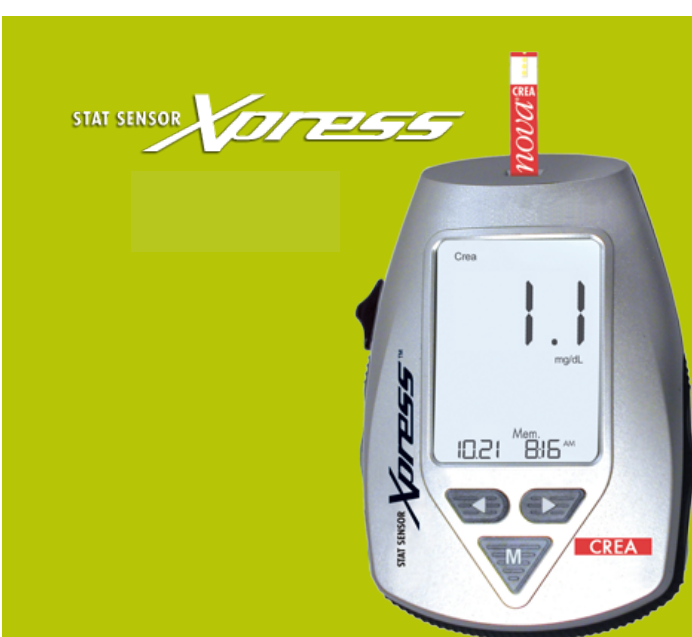
Approach

- 1 Assess the feasibility of repurposing an NHS approved algorithm for risk classification of acute kidney injury in oncology clinical trials
- 2 Develop a system that closely monitors risk of acute kidney injury occurring in subjects on an oncology clinical trial

Device & applications

Point of Care Creatinine device

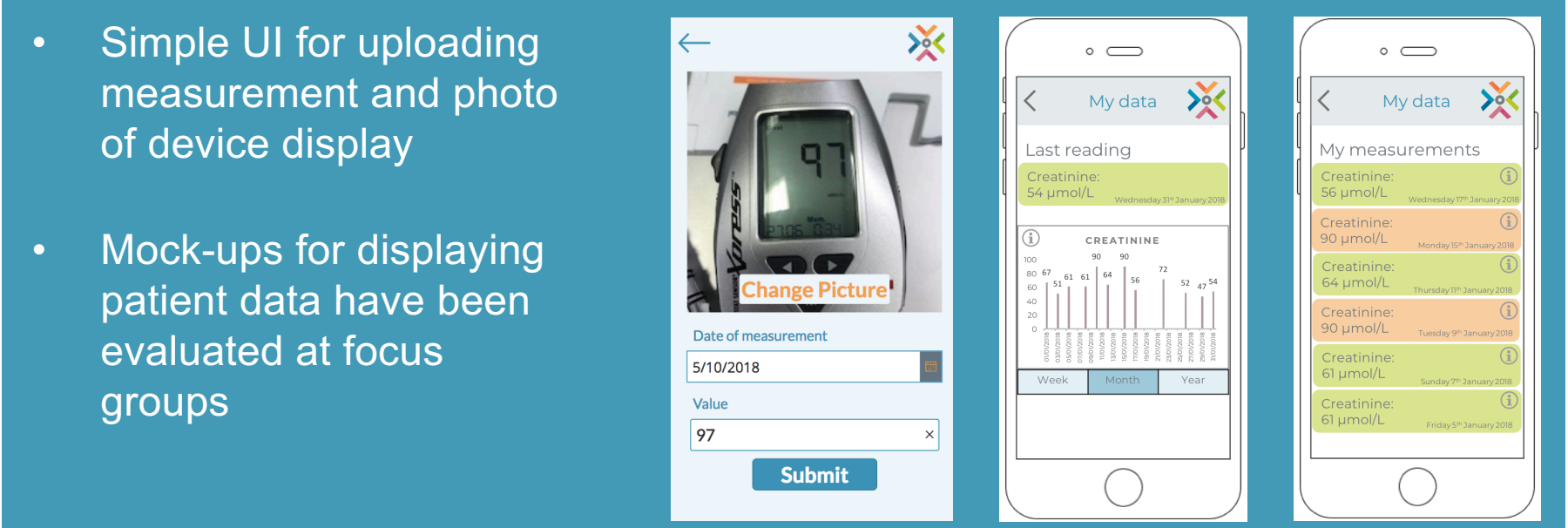
Nova[®] Biomedical StatSensor[®] Xpress[™]



- Finger stick capillary blood sampling
- Result in 30 seconds
- Large LCD display
- Limited connectivity (strip port connection to USB; Nova data transfer software)

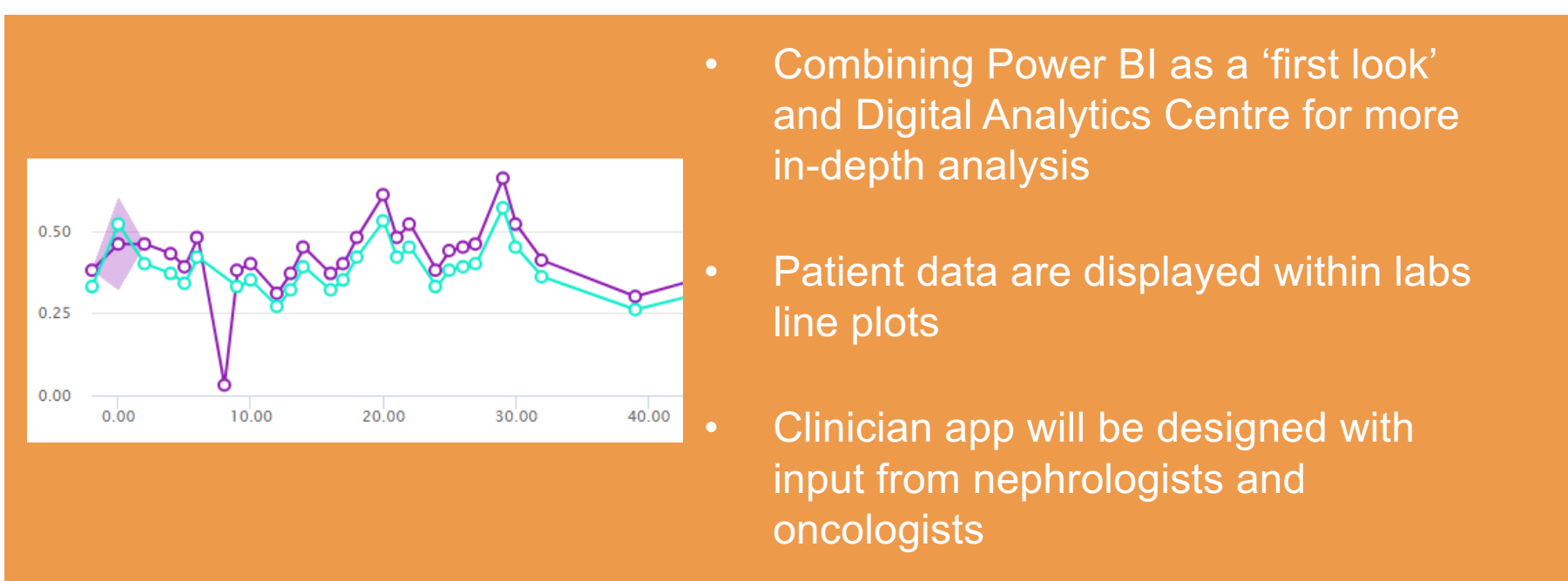
Patient app

Microsoft PowerApps proof of concept



Clinician app

Power BI & Digital Analytics Centre



Future development

- Digital clinical trial - scientifically characterise the benefits of digital and technological trial enhancements
- Develop visualisations for patient data
- Develop clinician-facing mobile application
- Connect Microsoft Machine Learning Studio

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