**Features Document**

This document is an outline of the features we wish to produce for the SPE project. We can’t guarantee that we will achieve everything (we are a small team of second years with limited time), however this is what we aim to achieve.

Clinician Section

* Add section of app called clinician section (or similar)
* The idea behind this section is that when patients come and visit a specialist, the specialist may wish to use the app to take photos of the patient.
* The clinician section should support a full mole mapping service. This will allow the clinician to take a photo of every single mole on a patient’s body.
* App should have “mole to remove” section within clinician section. Clinician should take photo of mole to be removed. Thus, when patient goes to surgery, they can take their phone with them. This will help prevent wrong sight surgery, as the operator can see exactly which mole should be removed through the app.
* This section should store a list of email addresses of clinician(s) which patients can use to email their photos.
* The patient can add / remove the email address of clinicians. There should be an option for a name / notes section to accompany email address.
* Clinicians can then give their email address to patients (or add it themselves in the app).

Mole Size Standardisation

* Detecting change in size of moles across photos is hard due to photo inconsistency. However, it’s very important as size change is a stronger indicator of cancer (see abcde procedure)
* Hence, it’s critical that app provides some way of standardising size of moles. Preferably requiring as little user interaction as possible (as many users as likely to struggle when it comes to using technology)
* We will experiment with different methods of standardising the image size. Preferably it should be accurate and rely on as little user input of possible
* We will experiment with having the users insert a coin for scale in a photo (as coins have well defined sizes). We may also experiment with having a ruler in the photo. If needs be, we can ask the user to measure their own tumour (but this is less ideal than other solutions if they are feasible). We will have to work together and explore which solutions actually work out, but we will start out by attempting to scale images using a coin to enabled size standardisation.

Usability

* Add question to survey that asks whether patient has been diagnosed with cancer. If yes, do survey. Otherwise, don’t.
* Individual responses to survey as well as score to send to clinician.
* Add delete button to photos – but warn them against it
* Default is email far shot, first mole, last mole. User can then add risk assessment and other photos.
* Worth looking about AI models to classify tumours
* Patient mental health patients with bad outome may be suicidal. Don’t make app tell patients its bad. Leave that to clinician.
* Record tutorial videos which can be displayed in help section of app. These videos should help user navigate app and understand how to use it (in addition to existing thorough help guidance).
* Camera a little bit disorientating to use. Add option to toggle photo overlay on or off. Also consider adding support for reversing video.

Fix Incomplete App Features

* Email feature not working in app currently. This needs to be fixed. Last year’s team said they found this very difficult.
* Replace placeholder text (in information section) with actual skin cancer information (to be provided by client)
* Based on market research, combining images with text may be useful to make information more engaging (in information section)

**Key**

* Essential
* Useful
* Unlikely to achieve but if we have time, may attempt to implement (not super important to app experience)