



# CAPABLE

## Cancer Patients Better Life Experience

Grant Agreement No. 875052

Start Date: 01/01/2020 (48 Months)

### ***Deliverable No. 6.3*** **User Interfaces prototype 2**

Due Date: [30/06/2022]

Submitted On: [04/07/2022]

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<b>Deliverable Type</b>		
<b>R</b>	Document, report	
<b>DEM</b>	Demonstrator, pilot, prototype	[X]
<b>DEC</b>	Websites, patent filings, videos etc.	
<b>OTHER</b>		
<b>Dissemination Level</b>		
<b>PU</b>	Public	[X]
<b>CO</b>	Confidential (Consortium members including the Commission Services)	
<b>CI</b>	Classified Information (Commission Decision 2015/444/EC)	

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- **1. Versions History**

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Version	Date	Author	Comments
1.0	28/06/2022	Angelika Vasilyeva	Initial draft
2.0	29/06/2022	Angelika Vasilyeva	implemented comments after review
3.0	30/06/2022	Angelika Vasilyeva	Final version

## ● 2. Executive Summary

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The aim of this deliverable is to illustrate the progress of the Patient's Mobile App and Physician's Web System development by focusing on presenting their implemented GUIs (Section 3) and the plans for the final GUIs for features that are not yet supported and will be supported by M36 (Section 4).

The development is being held in accordance with approved UI (User Interface design) /UX (Clickable prototype) guidelines for both Physician's Web System ([UI/UX](#)) and Patient's Mobile App ([UI/UX](#)).

The process is being performed in three directions simultaneously: Front-end development, Back-end development and Mobile (Android) app development. Front-end is the user interface (UI/UX) of the Physician's web system; Mobile - is the development of an Android mobile app for patients and Back-end - creating logic and connection between all components of the system, Case Manager and Data Platform.

The progress of GUI development is highly dependent on the performance of all CAPABLE components (including DSS, DP and CM). Therefore we continue to connect User Interface scenarios in accordance with the development progress of the CAPABLE system components.

Development progress demonstration is divided into two chapters:

- "GUI: Physician's and Patient's apps". The chapter provides the demonstration links to the functioning parts of the system.
- "The upcoming features". The chapter contains the descriptions of finished front-end functionality and mobile application screens that will be connected to the back-end system in accordance with the [development timeline](#).

## ● **3. GUI: Physician's and Patient's apps**

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To demonstrate the development progress special user scenarios for Physicians and Patients will be used. The results are provided via links to the recorded screencasts with comments.

The demonstration is according to the following two scenarios:

1. [Enrollment + Symptom reporting] part shows the working enrollment scenario, treatment prescription and symptom reporting as well as interaction between Physician's Web System and Patient's Mobile App.
2. [Capsules] part shows working Goals setting and Virtual Capsules performance in the Patient's Mobile App.

### ○ **3.1. Enrollment + Symptom reporting**

The following demonstration is divided into four steps to show the connection between the components of the system.

- Step 1 [Physician's Web System]: Login to the CAPABLE Physician's web system, patient's profile creation & treatment prescription, complete enrollment
- Step 2 [Patient's Mobile App]: Login to the CAPABLE Patient's Mobile App, Home screen, Inbox, Symptom reporting, Immediate feedback
- Step 3 [Physician's Web System]: Symptom tab update, treatment prescription
- Step 4 [Patient's Mobile App]: New prescription in the Inbox

**Demonstration link:** [Enrollment + symptom reporting](#)

## ○ 3.2. Capsules

The Capsules are available in the Goals tab. The following [link](#) demonstrates the design of the tab and filtration by categories.

### ■ 3.2.1. Garden bowl

Demonstration link: [Garden bowl capsule](#)

### ■ 3.2.2. Gratitude jar

Demonstration link: [Gratitude jar capsule](#)

### ■ 3.2.3. My Usual walk

Demonstration link: [My usual walk capsule](#)

### ■ 3.2.4. Basic breathing

Demonstration link: [Basic breathing capsule](#)

### ■ 3.2.5. Breath focus

Demonstration link: [Breath focus capsule](#)

### ■ 3.2.6. Progressive muscle relaxation

Demonstration link: [Progressive muscle relaxation capsule](#)

### ■ 3.2.7. Modified Lion's breath

Demonstration link: [Modified Lion's breath capsule](#)

### ■ 3.2.8. Equal time for breathing in and out

Demonstration link: [Equal time for breathing in and out capsule](#)

### ■ 3.2.9. Photo voice

Demonstration link: [Photo voice capsule](#)

### ■ 3.2.10. Tai Chi

Demonstration link: [Tai Chi capsule](#)

### ■ 3.2.11. Yoga

Demonstration link: [Yoga capsule](#)

### ■ 3.2.12. Physical activity promotion

Demonstration link: [Physical activity promotion capsule](#)

*Note 1. This capsule is the process of the content updating.*

## 4. The upcoming features

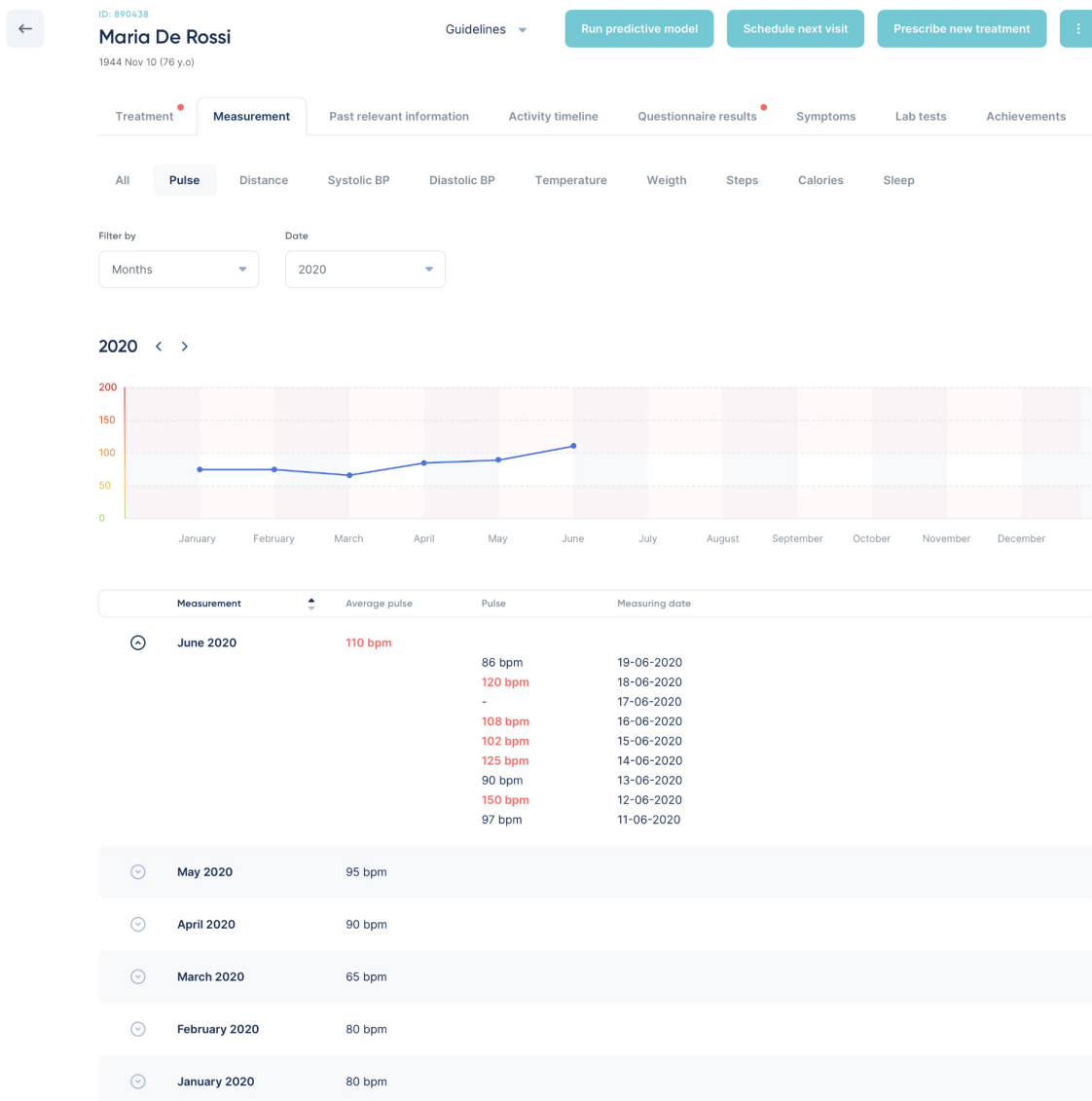
The following chapter is to demonstrate the features that are scheduled to be developed and connected to the system in accordance with the [development timeline](#). The features are presented via Links to the prototype and screenshots of the approved design. The text descriptions in the screenshots are only for demonstration purposes and can be changed and/or updated during the test period.

### 4.1. Physician’s Web System

#### 4.1.1. Measurement tab

Link to the prototype: [Link](#)

Link to the UI (design): [Link](#)



4.1.1.1. Patients Profile - Measurement tab – a tab with the Data of Vital signs of the Patient with visualization.

ID: 890438  
**Maria De Rossi**  
 1944 Nov 10 (76 y.o.)

Guidelines ▾ Run predictive model Schedule next visit Prescribe new treatment ⋮

Treatment **Measurement** Past relevant information Activity timeline Questionnaire results • Symptoms Lab tests Achievements

All Pulse Distance Systolic BP Diastolic BP Temperature Weighth Steps Calories Sleep

Filter by Weeks ▾ Date 14 June – 20 June 2020 ▾

14 June – 20 June 2020 < >

Measurement	Average value	Value	Measuring date
Pulse	108 bpm	86 bpm	19-06-2020
		120 bpm	18-06-2020
		-	17-06-2020
		108 bpm	16-06-2020
		102 bpm	15-06-2020
		125 bpm	14-06-2020
Distance	4 000 m		
Systolic BP	120 mm Hg		
Diastolic BP	80 mm Hg		
Temperature	38 °C		
Weighth	61 kg		
Steps	6 000		
Calories	219.6		
Sleep	9 h		

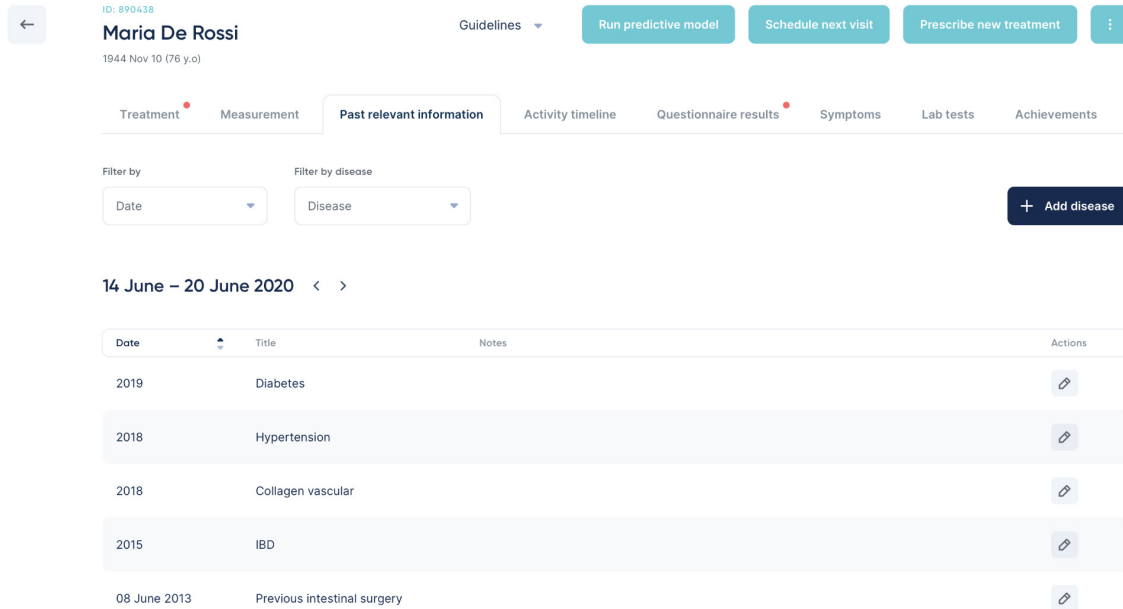
4.1.1.2. Patients Profile - Measurement tab – Example of a subtab.



■ 4.1.2. Past relevant information tab

Link to the prototype: [Link](#)

Link to the UI (design): [Link](#)



ID: 890438  
**Maria De Rossi**  
 1944 Nov 10 (76 y.o.)

Guidelines ▾ Run predictive model Schedule next visit Prescribe new treatment ⋮

Treatment Measurement **Past relevant information** Activity timeline Questionnaire results Symptoms Lab tests Achievements

Filter by: Date ▾ Filter by disease: Disease ▾ + Add disease

14 June – 20 June 2020 < >

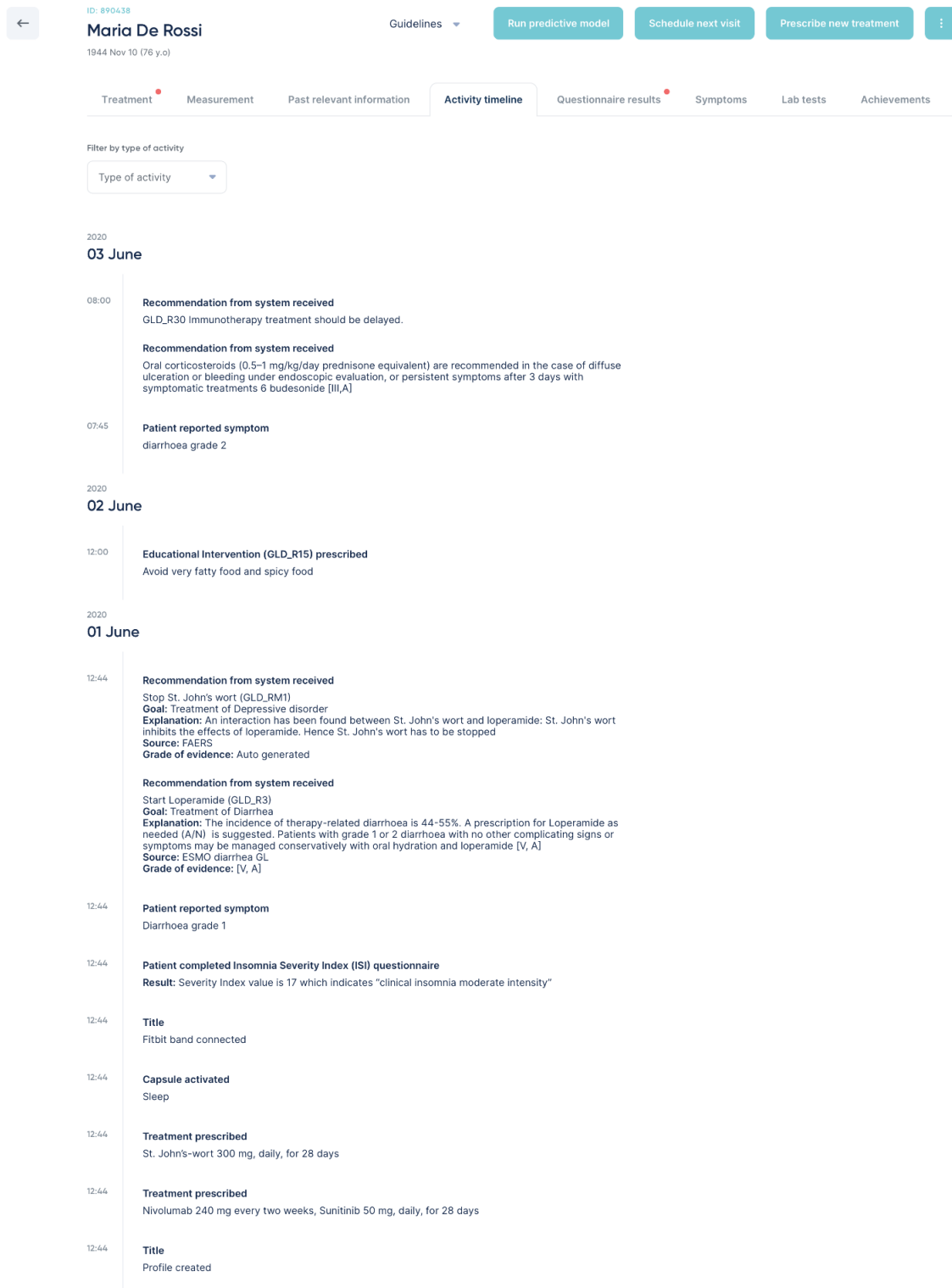
Date	Title	Notes	Actions
2019	Diabetes		
2018	Hypertension		
2018	Collagen vascular		
2015	IBD		
08 June 2013	Previous intestinal surgery		

4.2.1.1. Patients Profile - Past relevant information tab - Possibility to add a new pathology and then to filter by date and by name.

### 4.1.3. Activity timeline tab

Link to the prototype: [Link](#)

Link to the UI (design): [Link](#)



**Activity timeline for Maria De Rossi**

Filter by type of activity: Type of activity

**2020**

**03 June**

- 08:00**
  - Recommendation from system received**  
GLD\_R30 Immunotherapy treatment should be delayed.
  - Recommendation from system received**  
Oral corticosteroids (0.5–1 mg/kg/day prednisone equivalent) are recommended in the case of diffuse ulceration or bleeding under endoscopic evaluation, or persistent symptoms after 3 days with symptomatic treatments 6 budesonide [III,A]
- 07:45**
  - Patient reported symptom**  
diarrhoea grade 2

**2020**

**02 June**

- 12:00**
  - Educational Intervention (GLD\_R15) prescribed**  
Avoid very fatty food and spicy food

**2020**

**01 June**

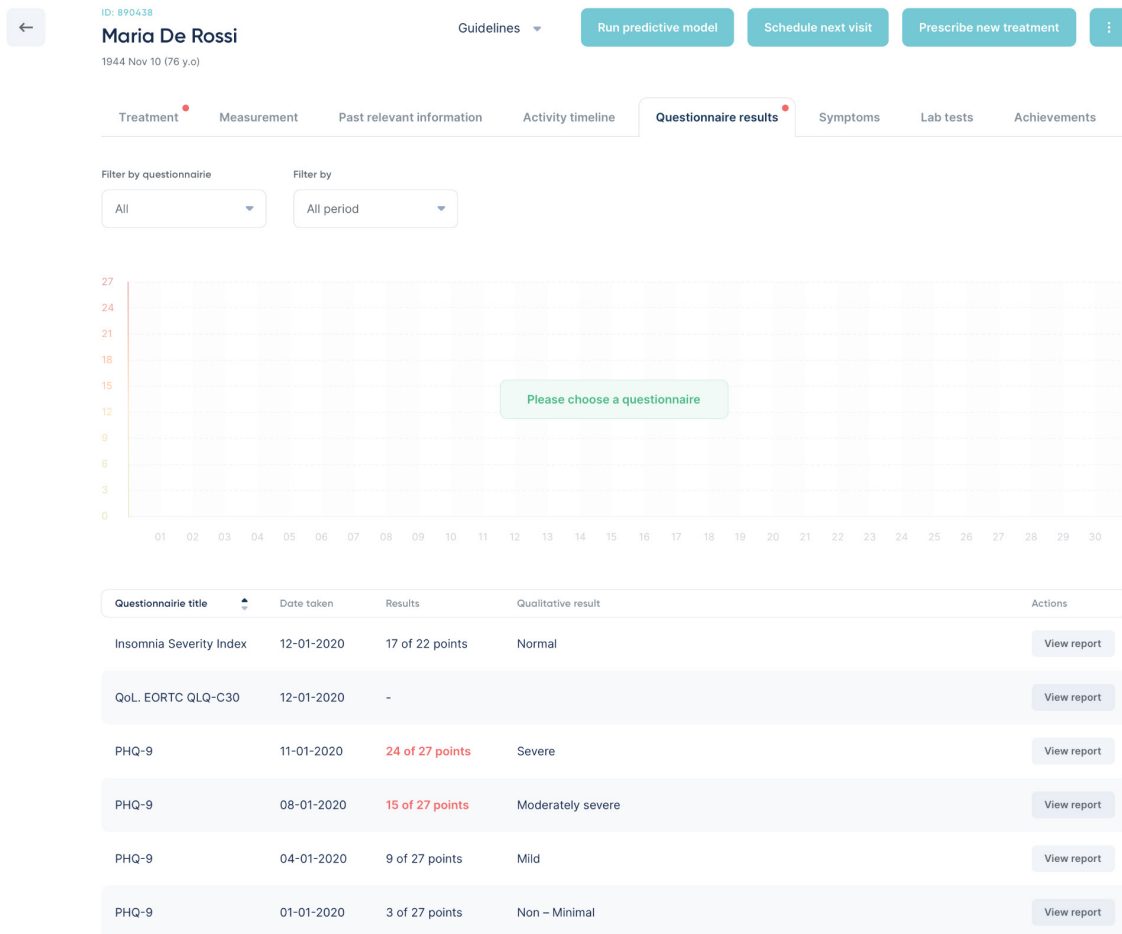
- 12:44**
  - Recommendation from system received**  
Stop St. John's wort (GLD\_RM1)  
**Goal:** Treatment of Depressive disorder  
**Explanation:** An interaction has been found between St. John's wort and loperamide: St. John's wort inhibits the effects of loperamide. Hence St. John's wort has to be stopped  
**Source:** FAERS  
**Grade of evidence:** Auto generated
  - Recommendation from system received**  
Start Loperamide (GLD\_R3)  
**Goal:** Treatment of Diarrhea  
**Explanation:** The incidence of therapy-related diarrhoea is 44-55%. A prescription for Loperamide as needed (A/N) is suggested. Patients with grade 1 or 2 diarrhoea with no other complicating signs or symptoms may be managed conservatively with oral hydration and loperamide [V, A]  
**Source:** ESMO diarrhea GL  
**Grade of evidence:** [V, A]
- 12:44**
  - Patient reported symptom**  
Diarrhoea grade 1
- 12:44**
  - Patient completed Insomnia Severity Index (ISI) questionnaire**  
**Result:** Severity Index value is 17 which indicates "clinical insomnia moderate intensity"
- 12:44**
  - Title**  
Fitbit band connected
- 12:44**
  - Capsule activated**  
Sleep
- 12:44**
  - Treatment prescribed**  
St. John's-wort 300 mg, daily, for 28 days
- 12:44**
  - Treatment prescribed**  
Nivolumab 240 mg every two weeks, Sunitinib 50 mg, daily, for 28 days
- 12:44**
  - Title**  
Profile created

4.1.3.1. Patients Profile - Activity timeline tab - shows all the events regarding a Patient - Recommendations, Notifications, Symptoms, Treatments.

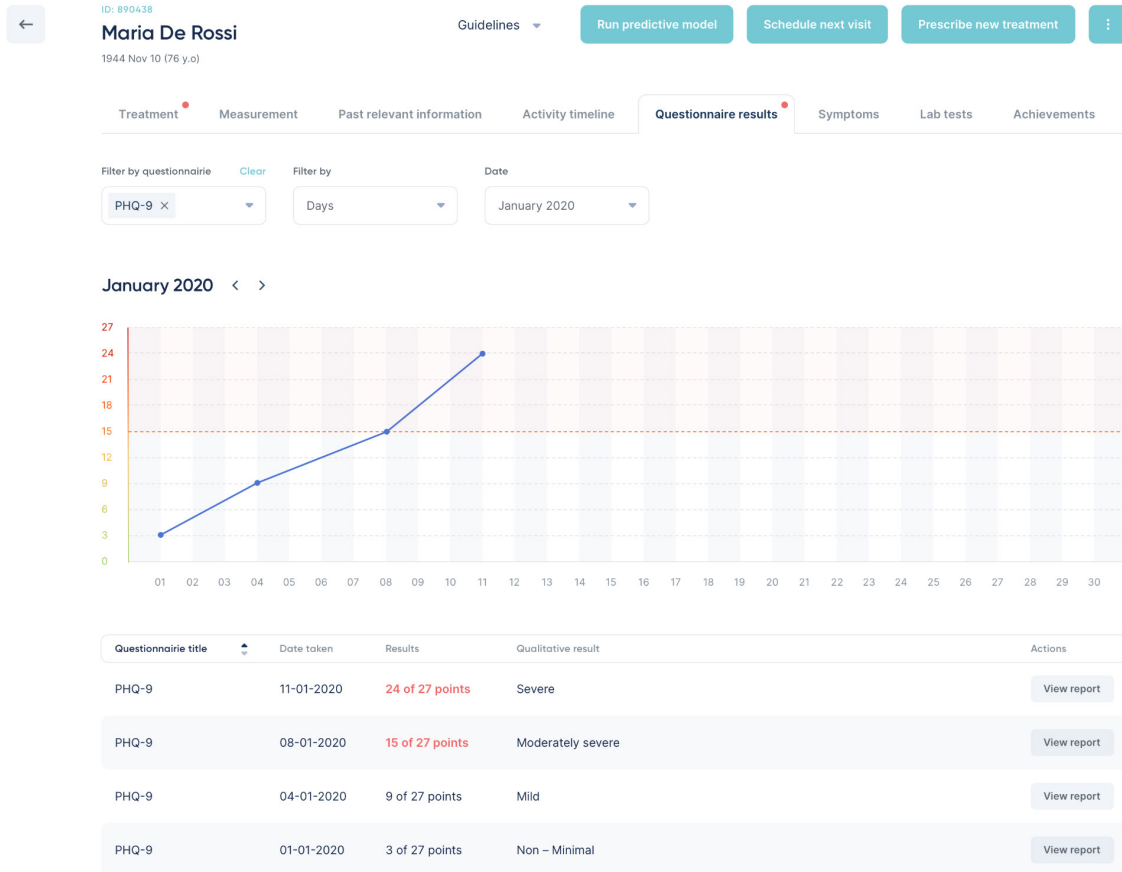
#### 4.1.4. Questionnaire results tab

Link to the prototype: [Link](#)

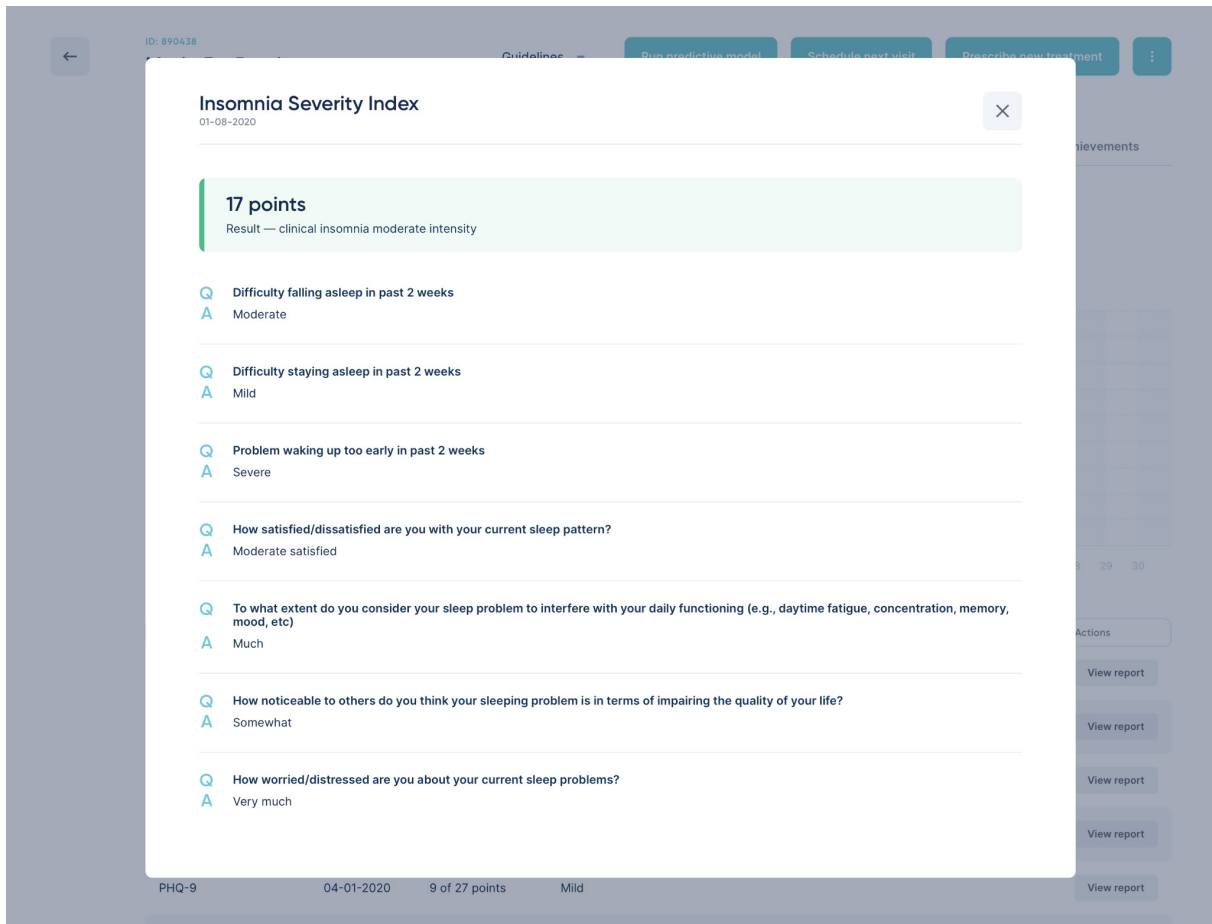
Link to the UI (design): [Link](#)



4.1.4.1. Patients Profile - Questionnaire results tab - possibility to visualize evolution of questionnaire results. Before a specific questionnaire is filtered a template message will be shown. It is possible to filter by questionnaire and by period.



4.1.4.2. Patients Profile - Questionnaire results tab - possibility to visualize evolution of questionnaire results. A specific questionnaire is chosen and visualized.

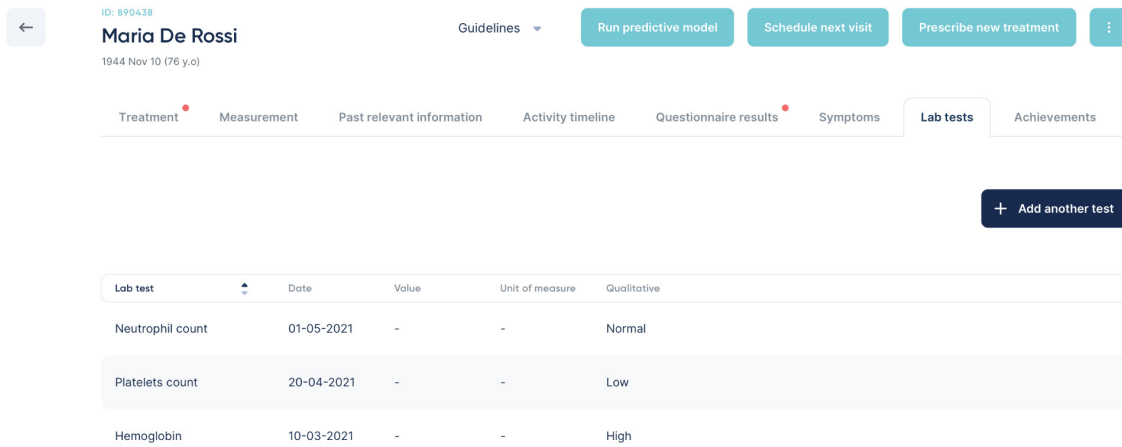


4.1.4.3. Patients Profile - Questionnaire results tab - View report with the results of specific questionnaire.

■ 4.1.5. Lab tests tab

Link to the prototype: [Link](#)

Link to the UI (design): [Link](#)

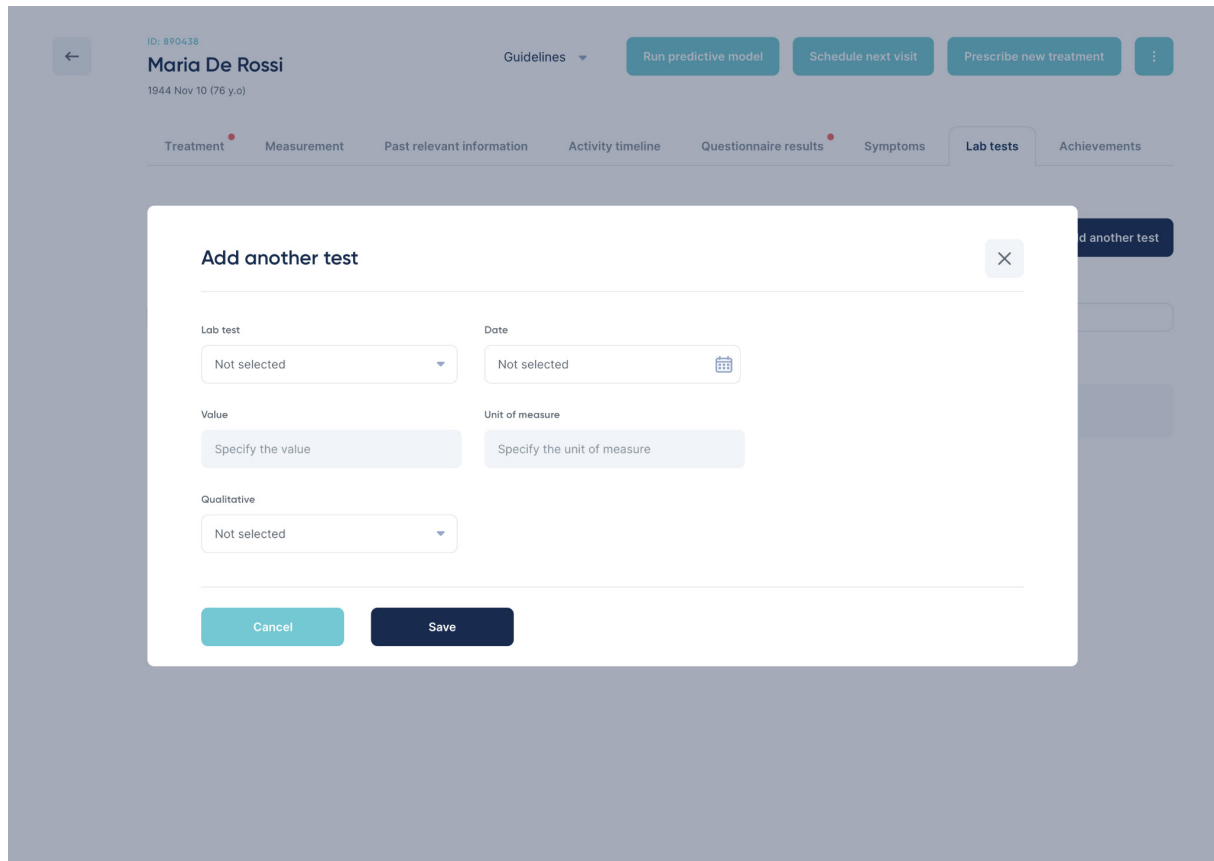


The screenshot shows a patient profile for Maria De Rossi (ID: 890438, 1944 Nov 10 (76 y.o.)). The 'Lab tests' tab is selected, displaying a table of test results. The table has columns for Lab test, Date, Value, Unit of measure, and Qualitative. The results are as follows:

Lab test	Date	Value	Unit of measure	Qualitative
Neutrophil count	01-05-2021	-	-	Normal
Platelets count	20-04-2021	-	-	Low
Hemoglobin	10-03-2021	-	-	High

Additional UI elements include a navigation bar with tabs for Treatment, Measurement, Past relevant information, Activity timeline, Questionnaire results, Symptoms, Lab tests, and Achievements. Action buttons for 'Run predictive model', 'Schedule next visit', and 'Prescribe new treatment' are visible. A '+ Add another test' button is located below the table.

4.1.5.1. Patients Profile – Lab tests tab where all test results will be accumulated.

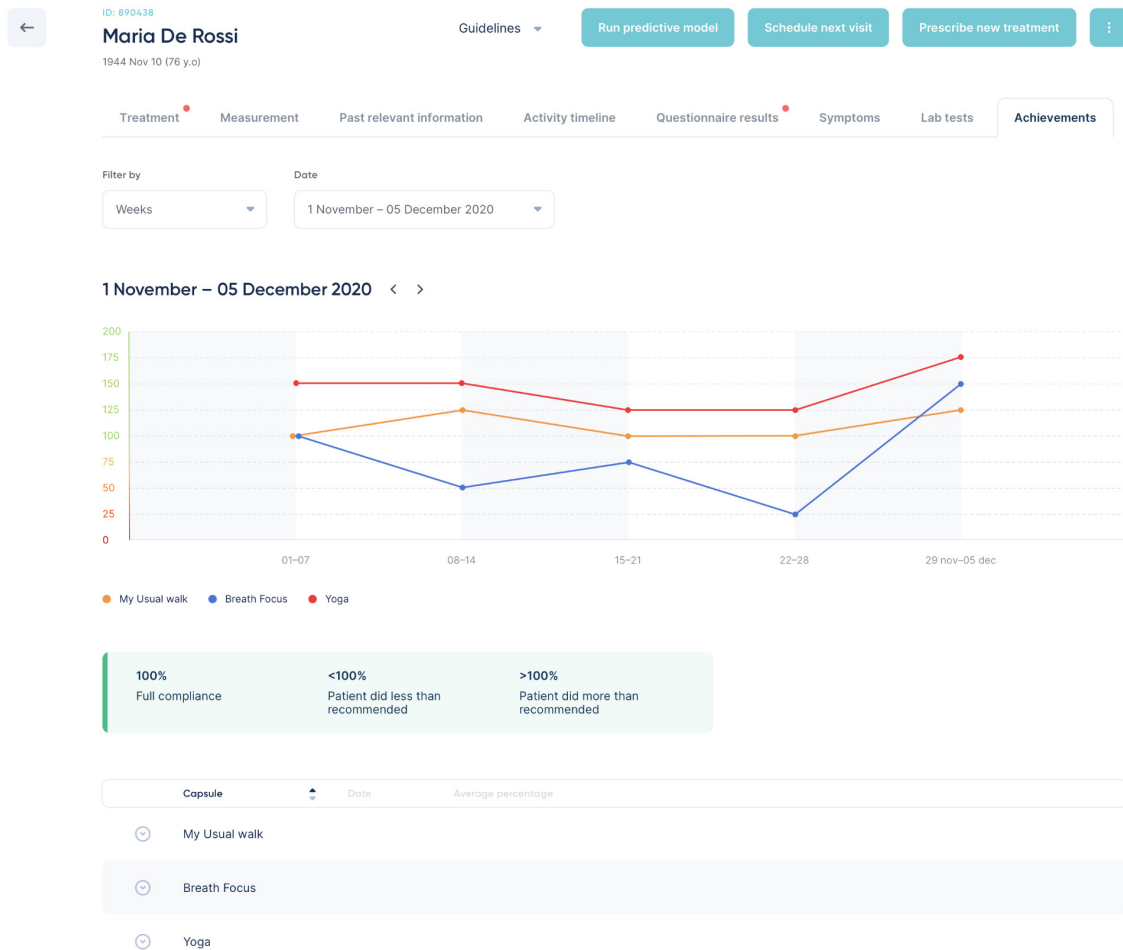


4.1.5.2. Patients Profile – Possibility to add Lab tests result manually from a list.

### 4.1.6. Achievements tab

Link to the prototype: [Link](#)

Link to the UI (design): [Link](#)

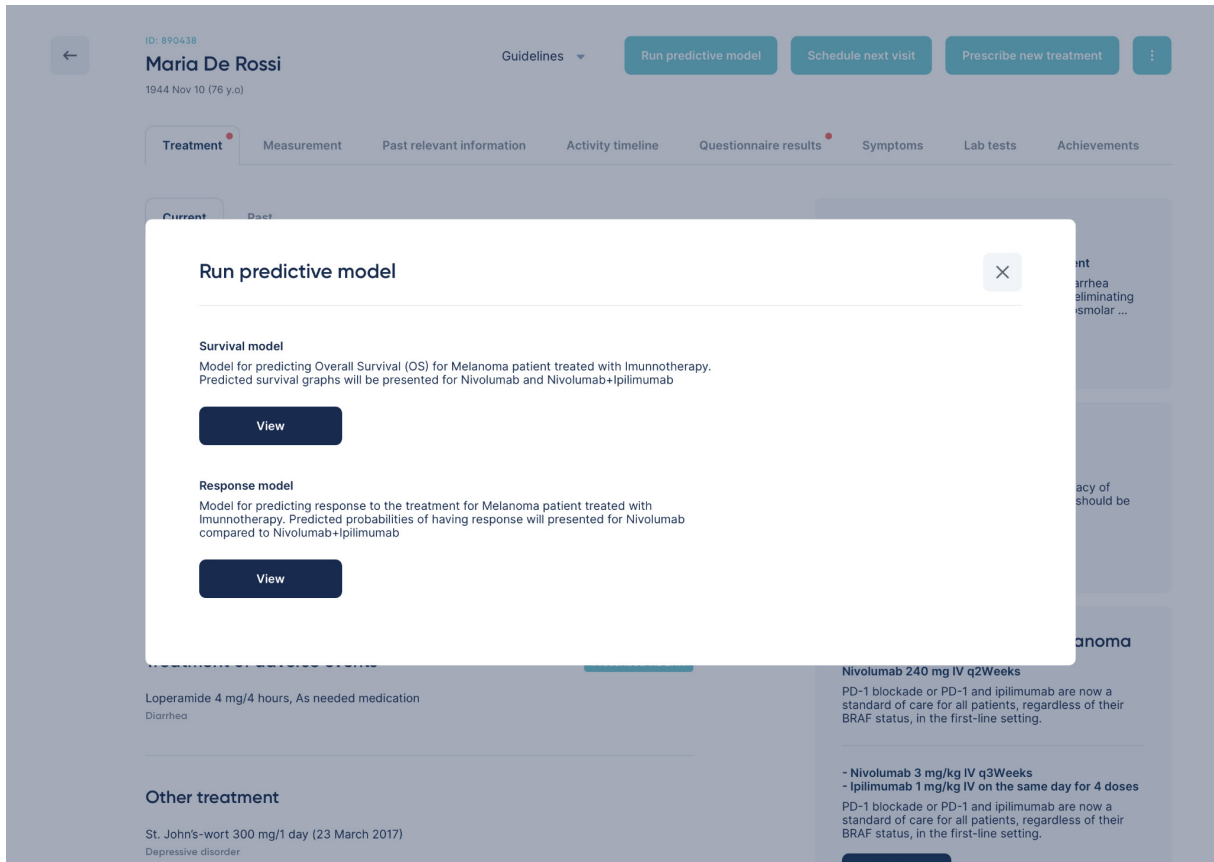


4.1.6.1. Patients Profile - Achievement tab – Visualization of the patient’s progress week by week for each prescribed Activity as % compliance. These will not be available through a Patient app. The results will be discussed during a live visit.

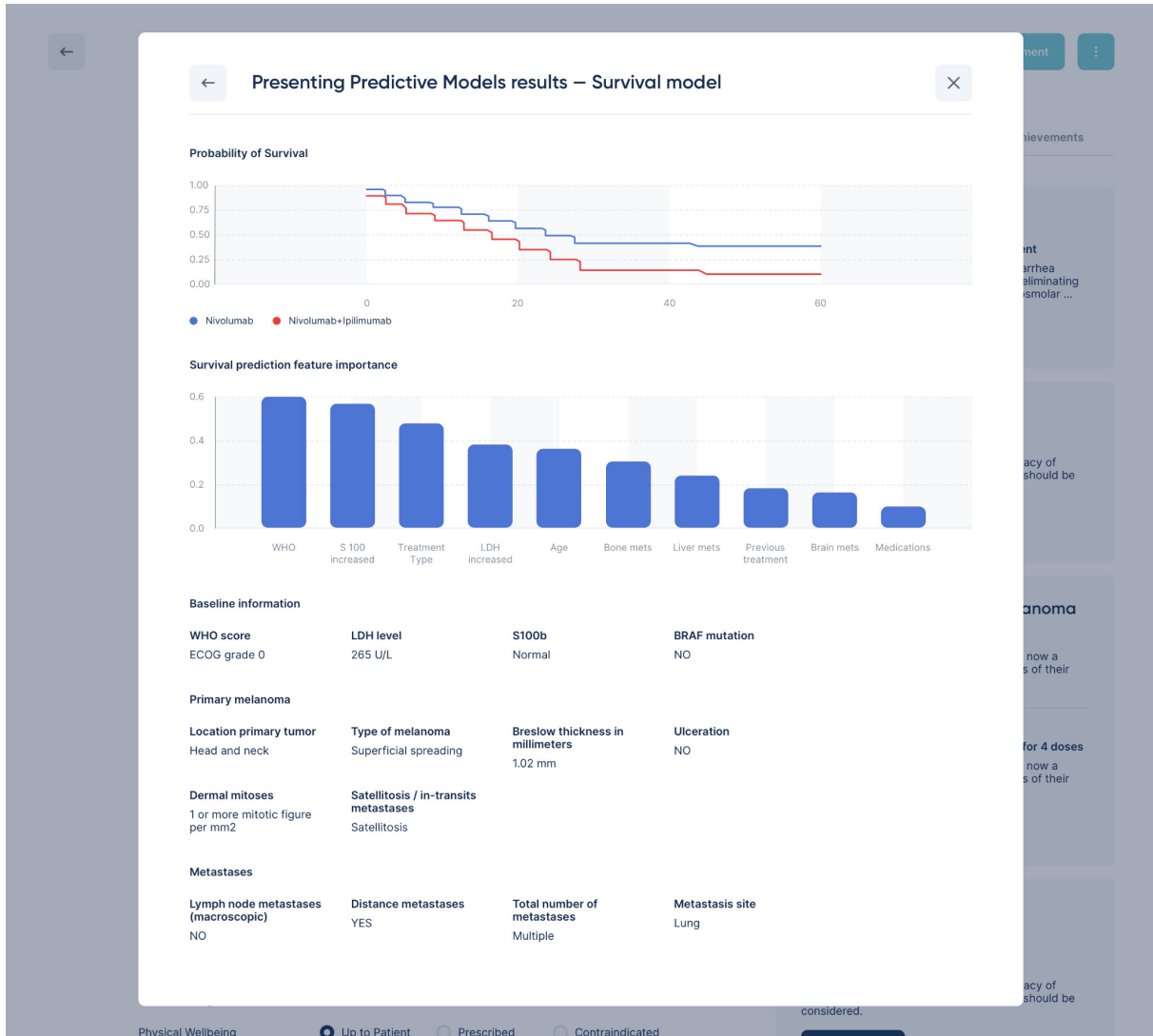


■ 4.1.7. Run predictive model tab

Link to the UI (design): [Link](#)



4.1.7.1. Patients Profile - Run predictive model function - a list of available models for a specific Patient.



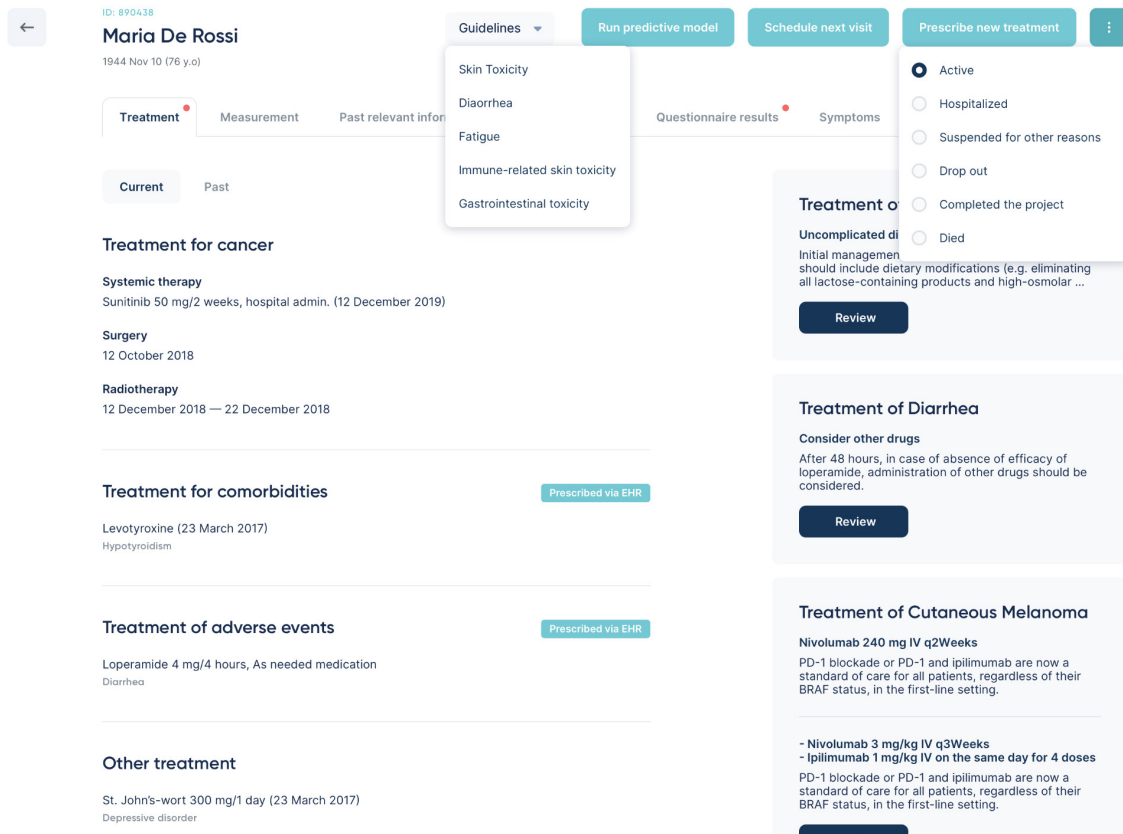
4.1.7.2. Patients Profile - Run predictive model function - Survival model.



4.1.7.3. Patients Profile - Run predictive model function - Survival model.

■ 4.1.8. Guidelines tab

Link to the UI (design): [Link](#)



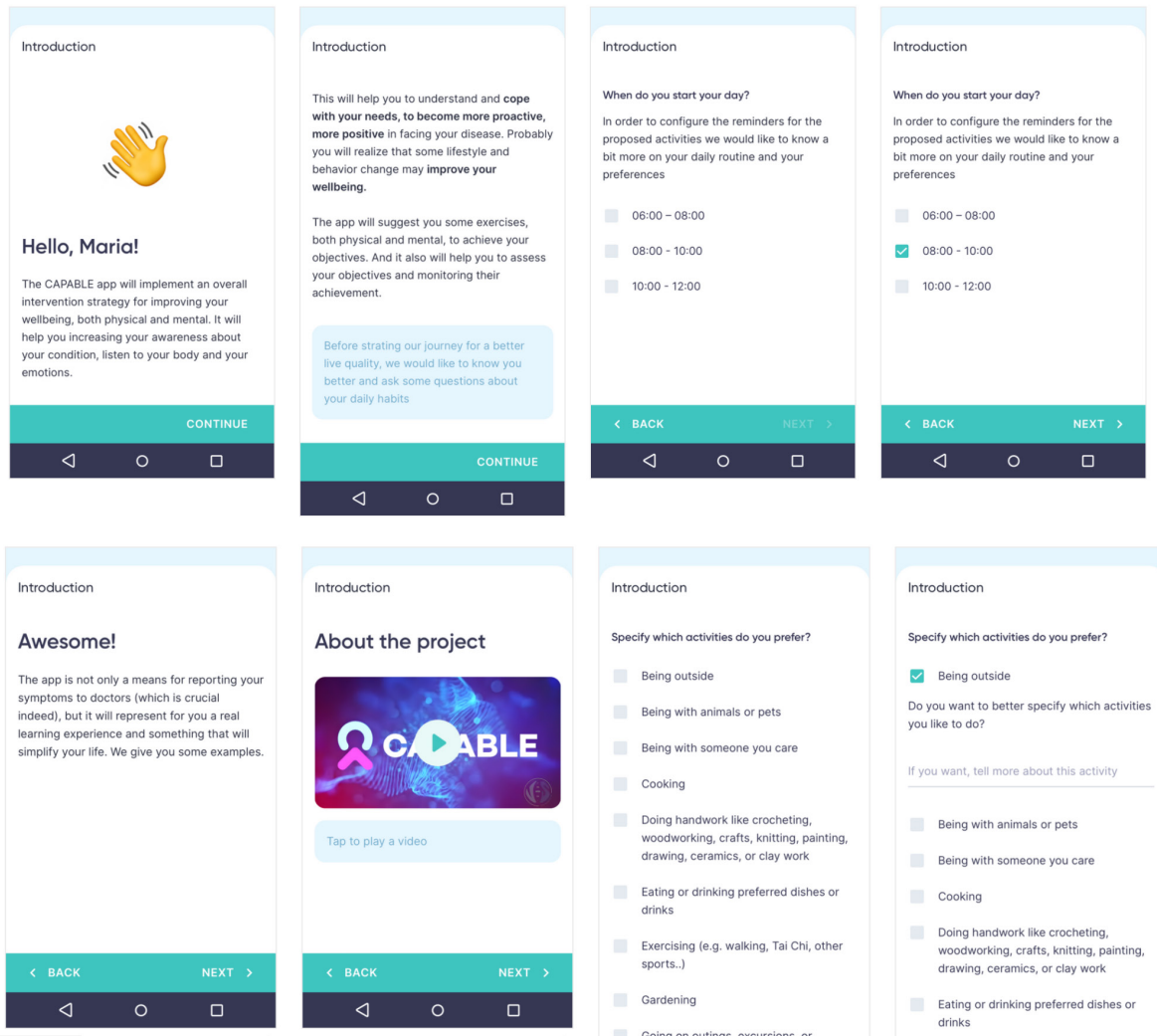
4.1.8.1. Patients profile - Skin toxicity, Fatigue, Diarrhea, Immune-related skin toxicity, gastrointestinal guidelines

○ **4.2. Mobile App for Patients**

■ 4.2.1. Onboarding (Health status)

Link to the UX: [Onboarding prototype](#)

Link to the UI (design): [Link](#)

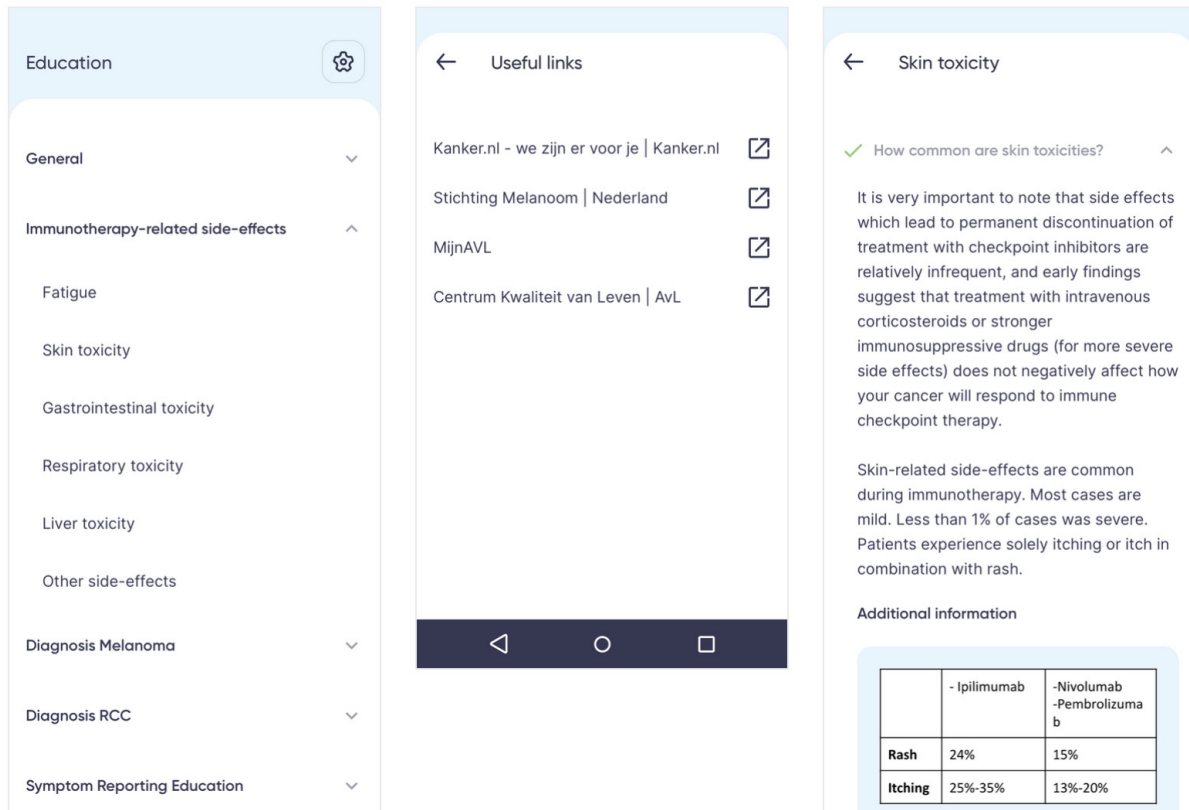


4.2.1.1. Welcome screens and introduction of the CAPABLE System. The Patient provides the information about their sleeping habits, physical activities and hobbies. The description texts in the screenshots are for demonstration purposes only and will be updated during the development process.

■ 4.2.2. Education tab

Link to the UX: [Education tab prototype](#)

Link to the UI (design): [Link](#)

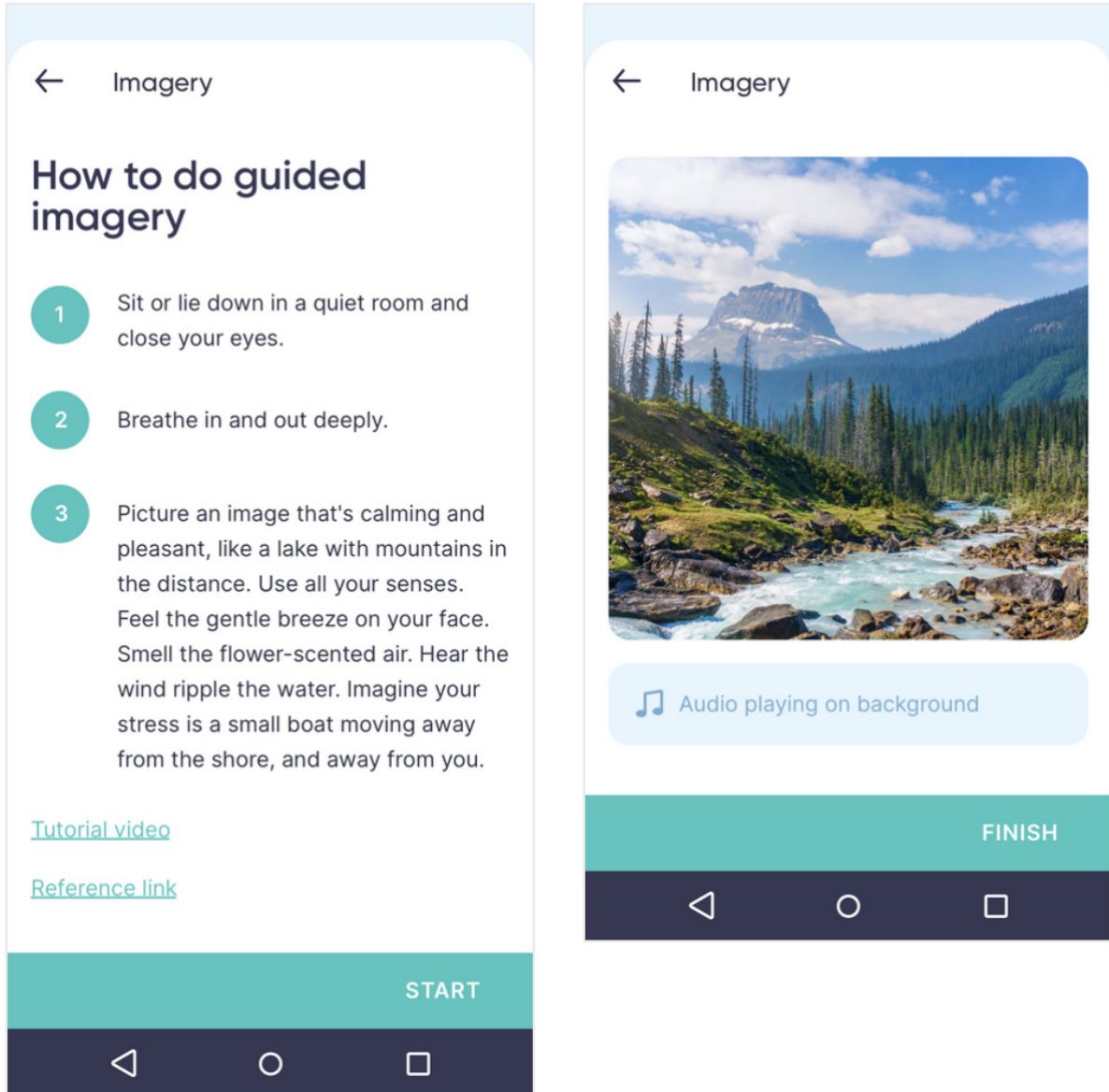


4.2.2.1. The Capable system will provide to the patients clinically validated educational contents (from AIMAC sources and other available medical websites)

■ 4.2.3. Imagery Training capsule

Link to the UX: [Imagery Training capsule prototype](#)

Link to the UI (design): [Link](#)



4.2.3.1. Introduction screen to the Imagery training capsule, screen with audiovisual user interface

■ 4.2.4. Questionnaires

Links to the prototype:

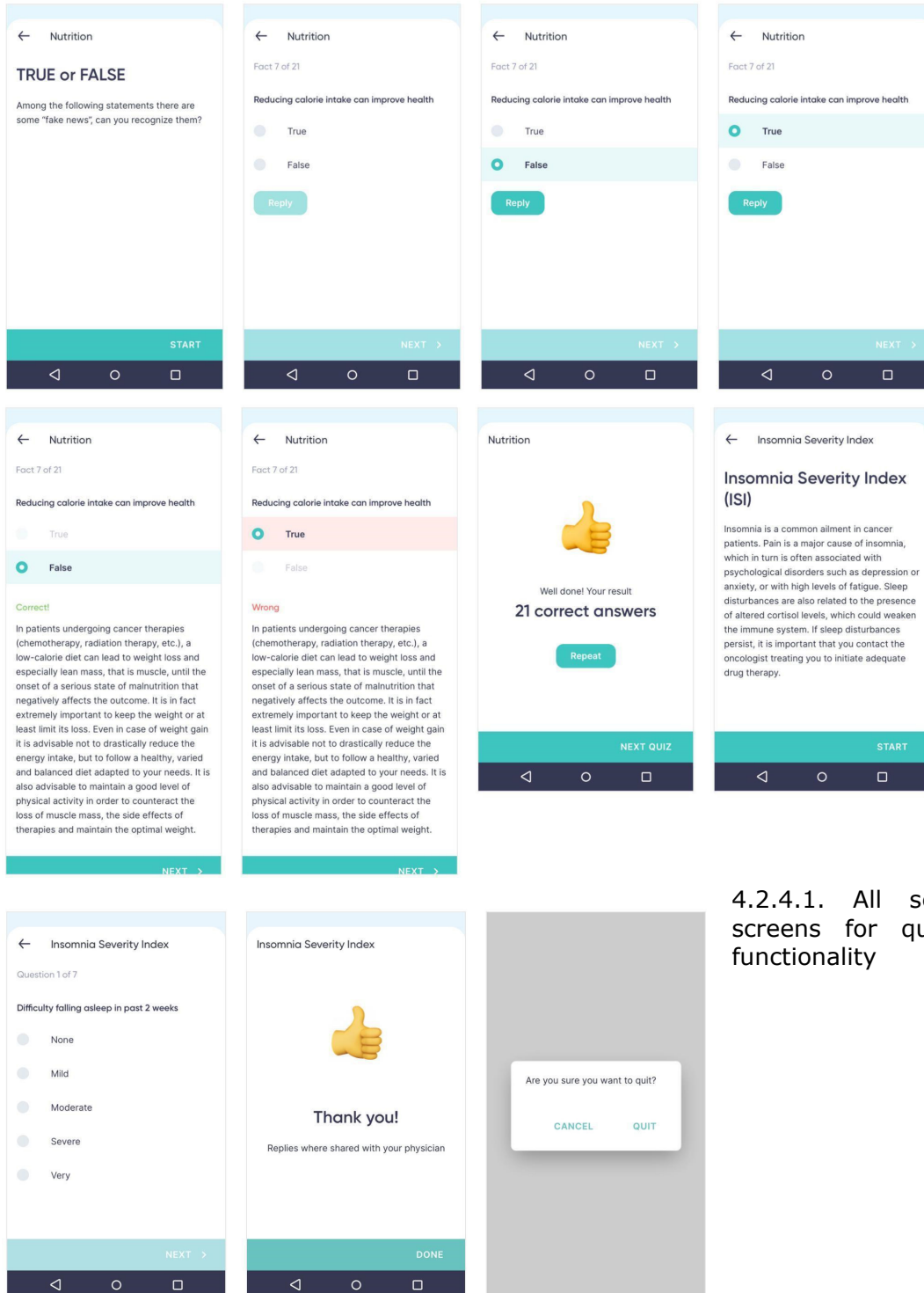
- [PHQ-9](#)
- [Insomnia Severity Index](#)



- [Sleep facts](#)
- [How are you feeling physically/emotionally](#)
- [Mood](#)

[thermometer](#)

Link to the UI (design): [Link](#)

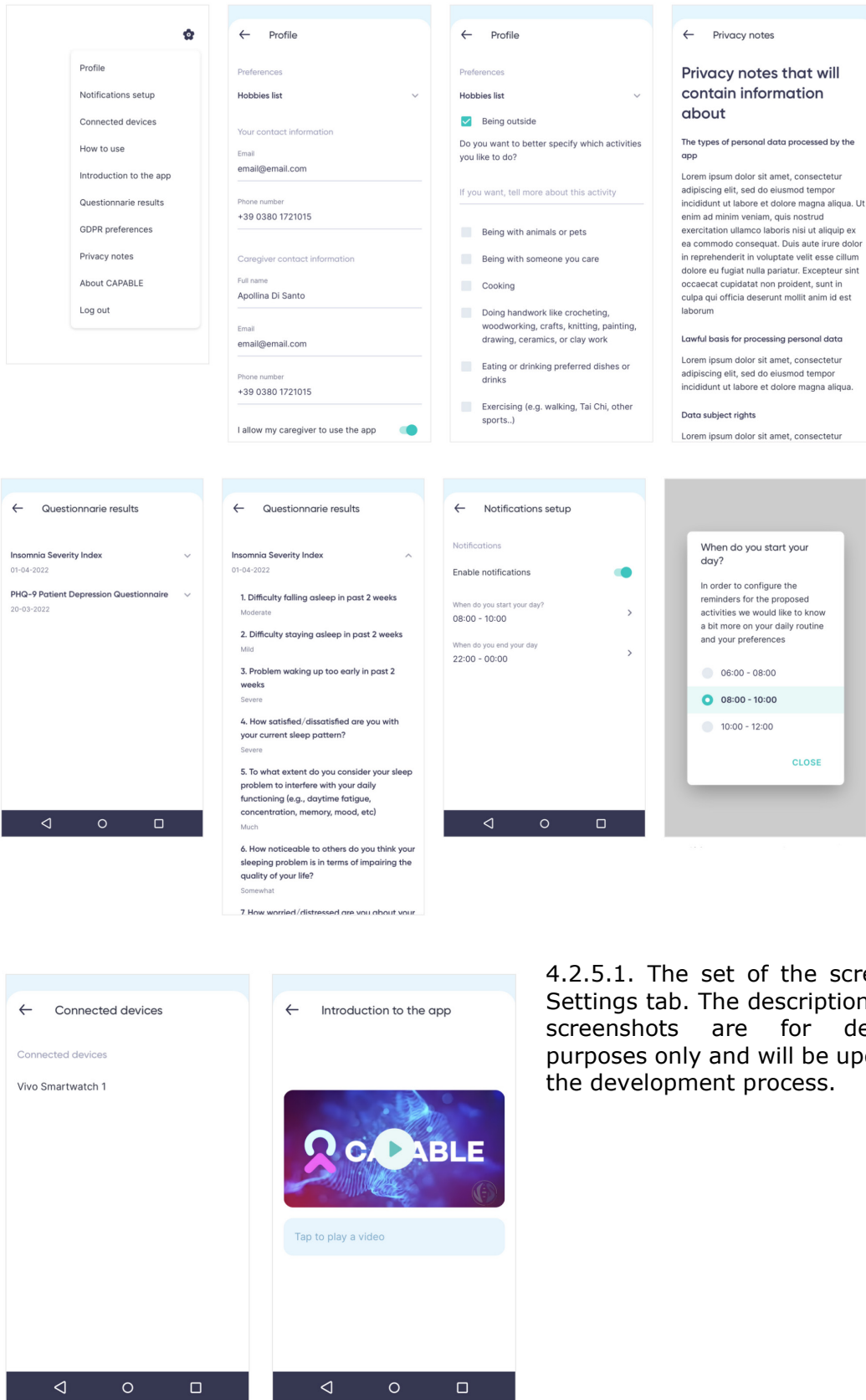


4.2.4.1. All set of the screens for questionnaire functionality

■ 4.2.5. Settings

Link to the UX: [Settings tab prototype](#)  
 Link to the UI (design): [Link](#)





4.2.5.1. The set of the screens for the Settings tab. The description texts in the screenshots are for demonstration purposes only and will be updated during the development process.

## ● 5. Glossary

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UI	User-Interface
UX	User Experience (Interactive prototype)
CTACE	Common Terminology Criteria for Adverse Events. The CTCAE displays Severity Grades 1 through 5 with unique clinical descriptions of severity for each adverse event