

BD4QoL

BIG DATA FOR QUALITY OF LIFE

December 2021

1. ABOUT THE BD4QoL PROJECT

In Spring 2022 a prospective clinical trial starts involving 420 people after the treatment of Head and Neck Cancer in Italy and UK and their caring physicians, in which the BD4QoL apps for monitoring quality of life and supporting study participants in addressing their day-by-day issues will be experienced. The trial has been registered in clinicaltrials.gov database with study identifier [NCT05315570](https://clinicaltrials.gov/ct2/show/study/NCT05315570).

Would you like a closer look on how BD4QoL works and is implemented? See the project's presentation video: <https://youtu.be/90YmWxtytn0>

For more information about BD4QoL, visit: www.bd4qol.eu

2. BD4QoL NEWS&EVENTS

Final versions of BD4QoL apps released to study participants

The BD4QoL apps have been completed and released to study participants - patients and hospital staff - in December 2021.

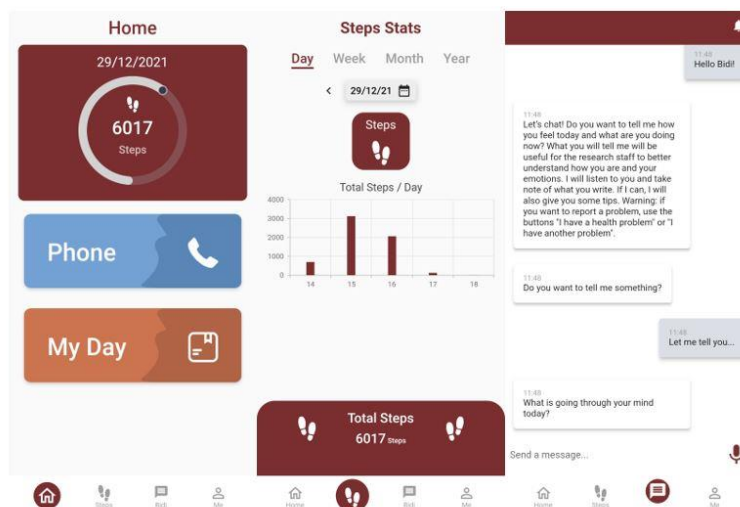


Figure 1 BD4QoL mobile apps

The final release has been presented to and approved by the Ethical Committee of the study sponsor. It is the first clinical study that implements recommendations and guidelines for the use of Artificial Intelligence (Consort-AI) and Mobile Technologies (CTTI) in clinical trials. See the users tutorial [here](#)

More details on CONSORT-AI guidelines can be found [here](#)

Guidelines for safe and reliable use of mobile technologies in clinical trials can be found by consulting the CTTI guideless and checklist [here](#)

On 25 October 2021, the "Users' training on the BD4QoL apps" was held in Milan, at the Istituto

Nazionale dei Tumori premises. The aim of the workshop was to train the staff involved in the clinical trial execution on the installation and functionalities of the BD4QoL platform (including: Mobile apps, Chatbot, Point-of-care dashboard, Quality of Life questionnaires collection).

Technological advancements – IBM Watson powered chatbot for patients' support

What's is the bidi chatbot?

IBM, in collaboration with clinical experts developed a user friendly chatbot, called Bidi which provides a natural language interface for users. Bidi provides motivational messages, displays alerts of when there's a change in health or social activity and also provides an outlet to let the clinical team know how they are feeling and progressing. With the chatbot, users can log health and non-health related symptoms and get information and tips, ensuring that the patient's clinical team are alerted if the patient logs any concerning symptoms.

How was it made?

Bidi was developed using Watson Assistant on the IBM Cloud and further enriched using Watson Natural Language Understanding and Watson Tone Analyzer. Watson assistant facilitates the construction of complex dialogs with patients which were put together by clinical experts, guiding a patient through a conversation to motivate them to stay active or provide advice and tips on health concerns.

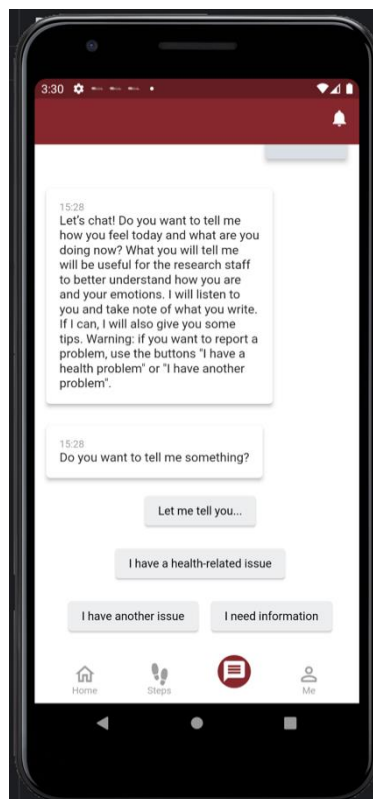


Figure 2 The Bidi Chatbot UI.

What's the latest?

Teaching Bidi Italian: Lately we've been translating the original English speaking chatbot to work in Italian as well. Watson Assistant, NLU and Tone analyzer all support multiple languages, including Italian, so our work consisted of translating the dialogues and tips into Italian, which was done and tested with our clinical partners.

Getting Bidi trial ready: Over the last months we've been busy bug hunting, testing and ensuring the chatbot is ready to scale to match the needs of the clinical trial when it begins.

Technological advancements – Monitoring patients' quality of life at Point of Care (POC)

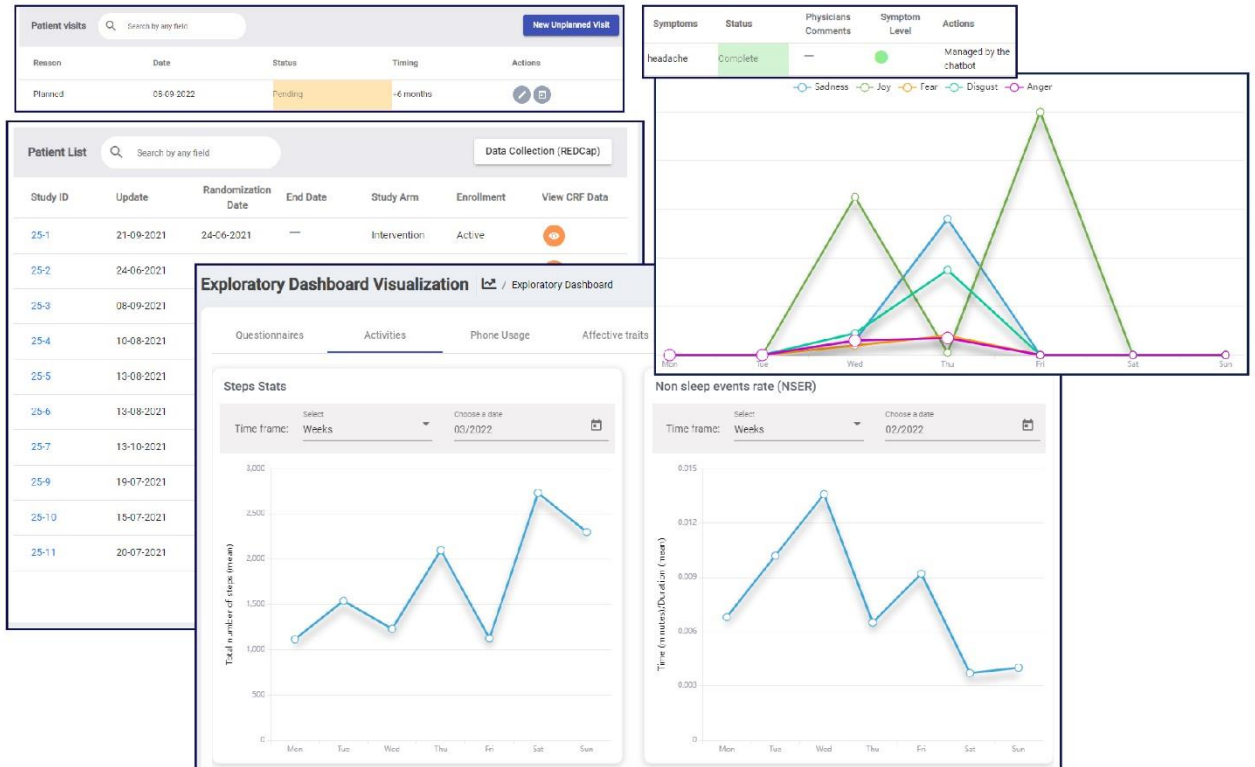


Figure 3 BD4QoL Point of Care

The Point of Care tool of BD4QoL has implemented a novel Workflow Management System that includes daily monitoring of alerts, visits, reported symptoms and periodic revisions of quality of life. These features facilitate early recognition of morbidities and potentially actionable changes relevant for risk prediction and quality of life for HNC survivors.

BD4QoL Coordinator receives prestigious ESMO AWARD 2021

The 2021 ESMO Award was presented to **Prof. Lisa Licitra** from the **Istituto Nazionale Tumori**, Milan, and the University of Milan, Italy, for her outstanding contribution to **advancing the understanding and treatment of head and neck cancer**, and for **motivating and mentoring medical oncologists worldwide**.



2021 ESMO AWARDS
RECOGNISING EXCELLENCE IN ONCOLOGY



In an interview published in the *ESMO Daily Reporter*, she discusses her inspirations and explains how integration of different technologies is key to advancing research in today's era of big data.

[Read the interview!](#)

BD4QoL 1st Technical Review



Big Data Models and Intelligent tools for Quality of life monitoring and participatory empowerment of head and neck cancer survivors

First project review

09/09/2021



On September 9th, 2021, the 1st Technical Review of the BD4QoL project took place. The Project Officer and the reviewers positively evaluated the work completed since then, providing recommendations on how to further improve it. What a valuable and fruitful moment for the project!

[Read more](#) about the first project review.

Save the date: the “Make Sense campaign” takes place from 19 to 23 September 2022



MAKESENSECAMPAIGN

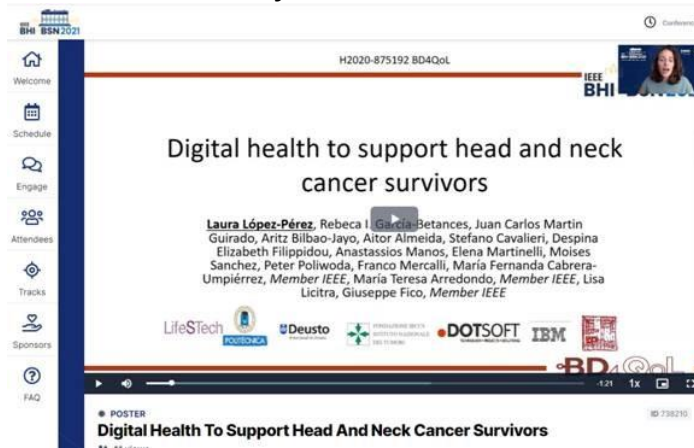
19-23 September 2022

The *Make Sense* campaign is a unique and exciting initiative by the **European Head and Neck Society (EHNS)**, that brings medical experts together from many disciplines, including head and neck cancer specialists and patient organizations, involved in any aspect related to head and neck cancer.

The *Make Sense* campaign aims to raise awareness of head and neck cancer and ultimately improve outcomes for patients with the disease by **driving awareness and education; encouraging early diagnosis and referral; and improving care of patients.**

3. BD4QoL PUBLICATIONS

BD4QoL paper discussion at BHI2021 conference



At the BHI 2021 conference, the UPM team presented the innovations brought to support head and neck cancer survivors within the BD4QoL project, discussing the paper “*Digital health to support head*

and neck cancer survivors". Specifically, the project presents innovative approaches to post-treatments care, including activities on improving HNC care and post-treatment workflows, behavior recognition modelling, affective computing, and personalized coaching.

[Read more](#) about the BD4QoL paper discussion at BHI2021 conference!

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