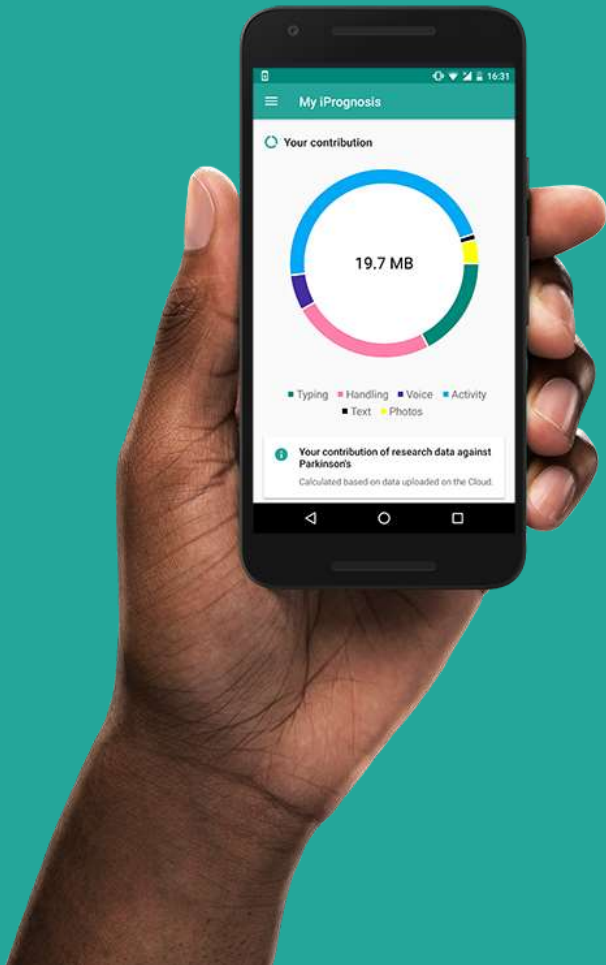


 i-PROGNOSIS

Intelligent Parkinson's early detection guiding novel supportive interventions



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1

Parkinson's disease (PD)





Parkinson's
Disease
(PD)

One of the commonest neurodegenerative diseases

1% of individuals over 60 years;
4% over 75 years

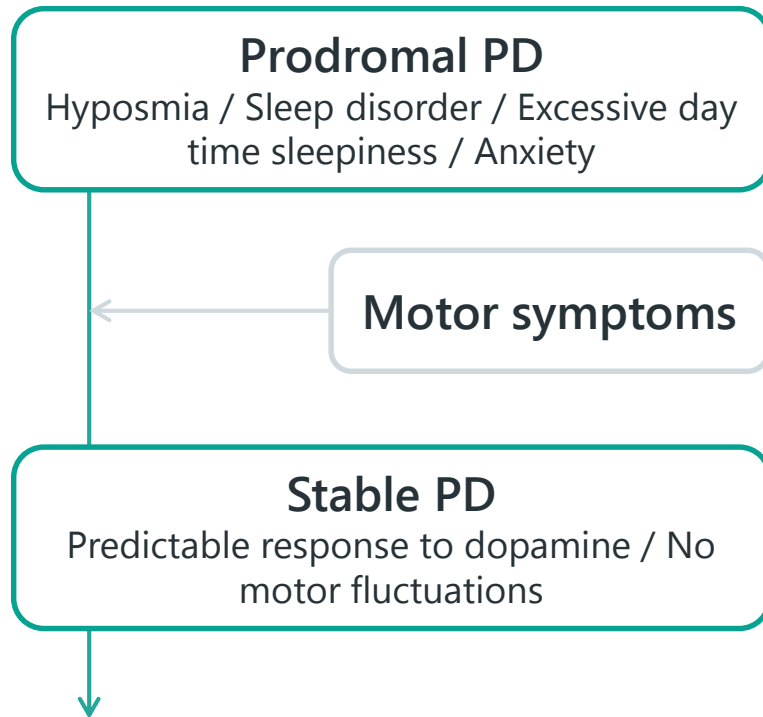
Progressive


Initial subtle symptoms evolve over
time





May take 10 years after
disease onset





Impact on
life quality

Daily activities are affected

Movement → Tremor, Bradykinesia

Walking → Freezing of gait

Eating → Obesity

Talking → Hypophonia

Writing → Micrographia

Sleeping → REM behaviour disorder

Mood → Depression

Expression → Hypomimia



Importance of early PD detection

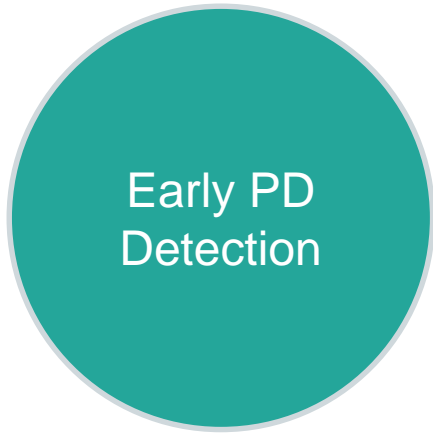
The sooner PD symptoms are identified and clinical diagnosis takes place, the sooner multidisciplinary therapy can be employed to sustain patients' quality of life.



2

The i-PROGNOSIS approach





A screening tool for PD in the daily living

i-PROGNOSIS aims to develop a mobile application that will record data **unobtrusively** from the user's daily interaction with the smartphone and smart web-connected devices to detect behaviour related to PD.



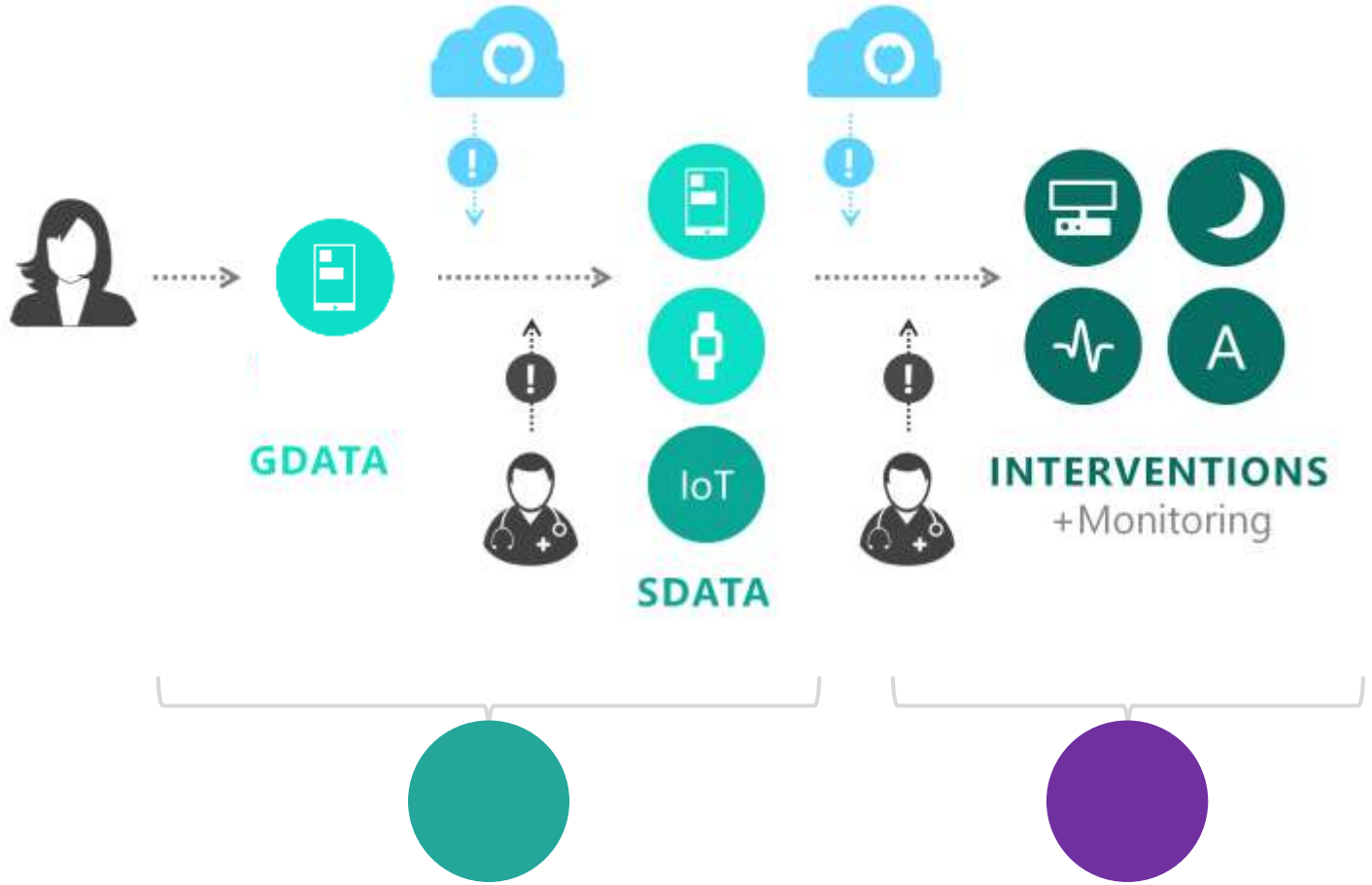
Novel ICT-based supportive interventions

Personalised gamified interventions to facilitate physical exercise, diet, emotional expression, voice and handwriting quality sustenance

Assistive interventions to improve oral communication, sleep and walking



i-PROGNOSIS
Final system



3

The GData Study





General
Data
collection


Engage volunteers in donating data against Parkinson's

PD patients and healthy individuals over 40 years old

Anonymous contribution

Only an Android smartphone is needed





What data?

Silent, unobtrusive collection via a mobile app

- Voice characteristics when on a phone call
- How steady the phone is held when talking on the phone or typing
- Keystrokes timing and pressure when typing
- The distance covered each day
- Emotional content from stored text messages
- Facial expressions from stored photos





Use of data

Machine learning

Develop computer algorithms that will learn from the data collected to detect behaviour related to PD.

Data security

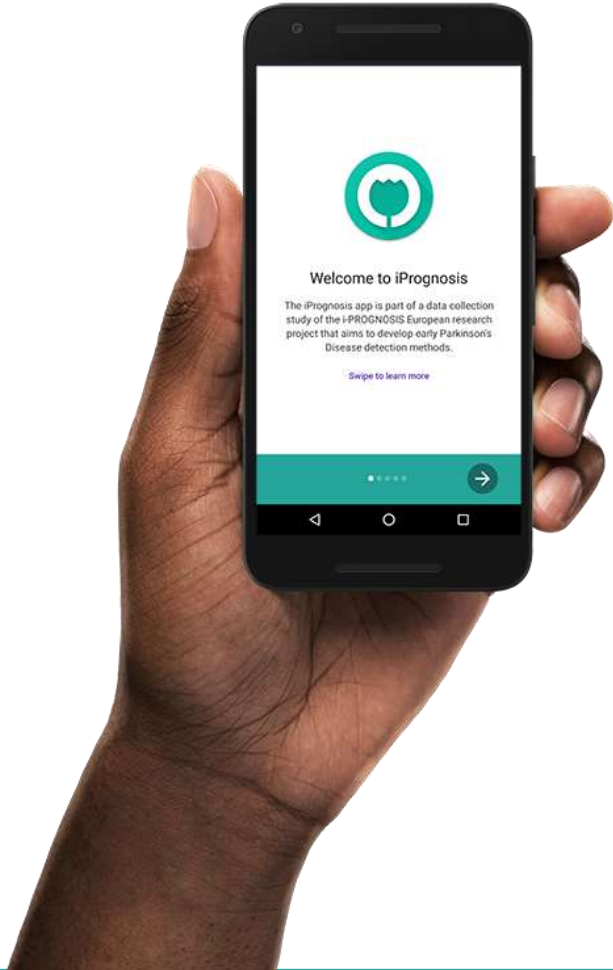
Data transferred securely/ anonymously and stored on Microsoft Azure servers.



4

How to participate

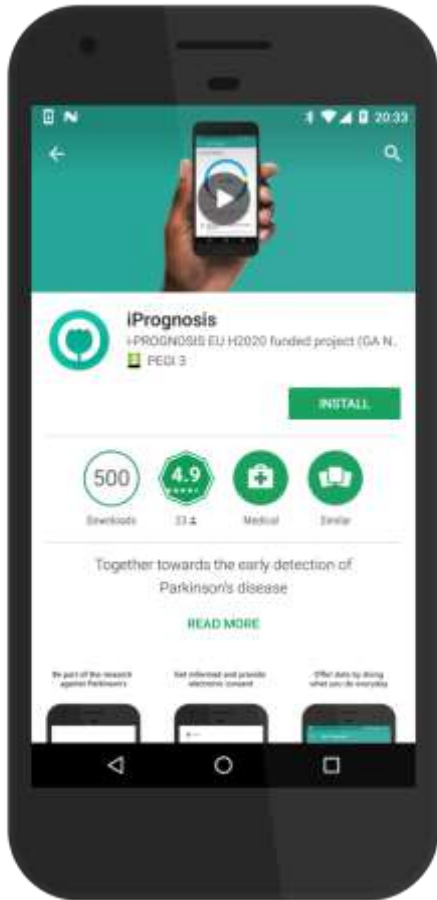




iPrognosis app

Be part of the research.
Donate data against Parkinson's.

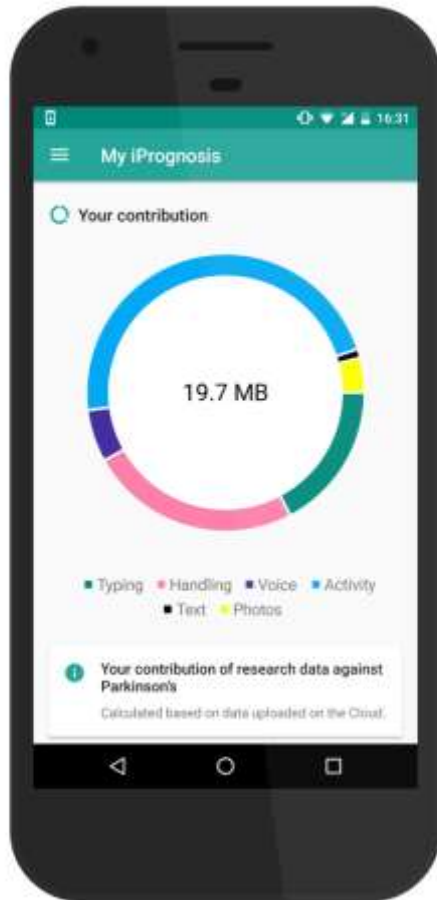




Download the iPrognosis app

The app is available for Android smartphones from the Google Play store, free-of-charge.

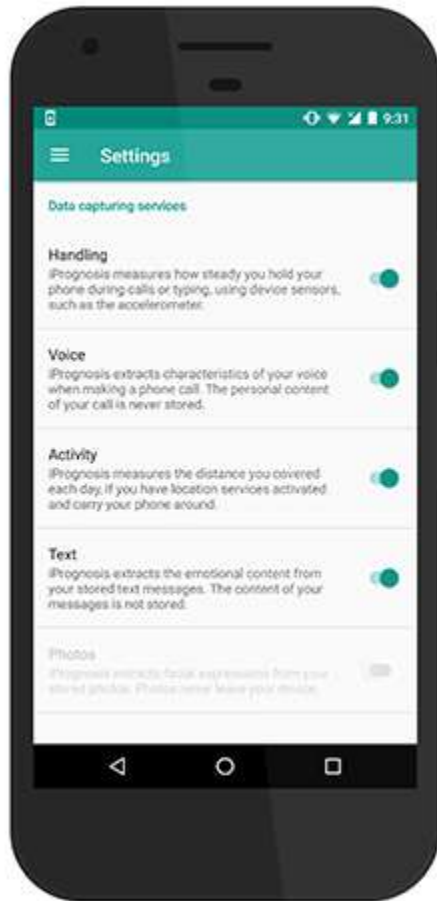




Offer data by doing what you do everyday. No more.

The iPrognosis app records data from your everyday use of the smartphone, e.g., when talking on the phone or sending a text message.

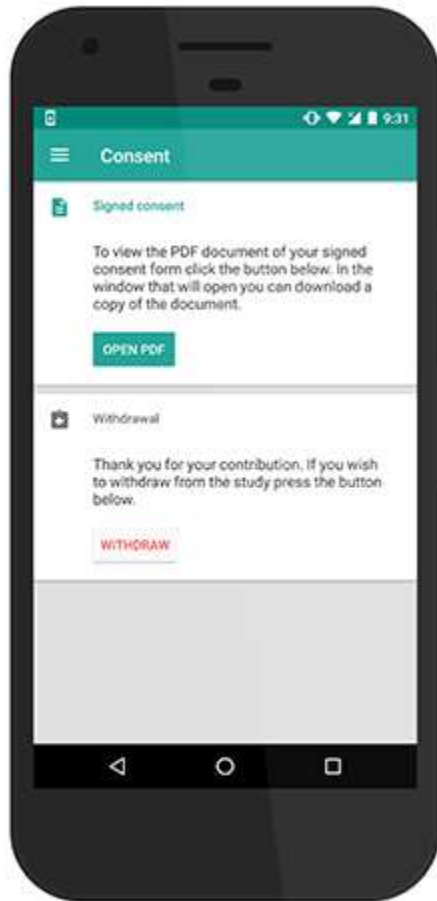




Choose what is being recorded

Through the settings of the app, you can modify what types of data are recorded at will.





Changed your mind? Withdraw at any time

Through the settings of the app, you can withdraw from the study at any time and even delete the data recorded so far.





Aristotle University of Thessaloniki Greece

GData Study in Greece

Project coordinator



Technische Universität Dresden Germany

GData Study in Germany



King's College London United Kingdom

GData Study in the UK



Faculdade Motrigada Humana Portugal

GData Study in Portugal



Microsoft | Innovation Center
Ελλάς



Microsoft Innovation Center Greece

Data protection and storage





Thank You

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