

AI-based Melanoma Detection in a Snap



MelaScan



Problem

What?



SKIN CANCER

+500k/year

Melanoma cases globally

Why?

52 Patient Visits/Day

per family doctor in Germany

<10 Minutes

family doctor's consultation for a patient

Problem

What?



SKIN CANCER

+500k/year

Melanoma cases globally

Why?

52 Patient Visits/Day

per family doctor in Germany

<10 Minutes

family doctor's consultation for a patient

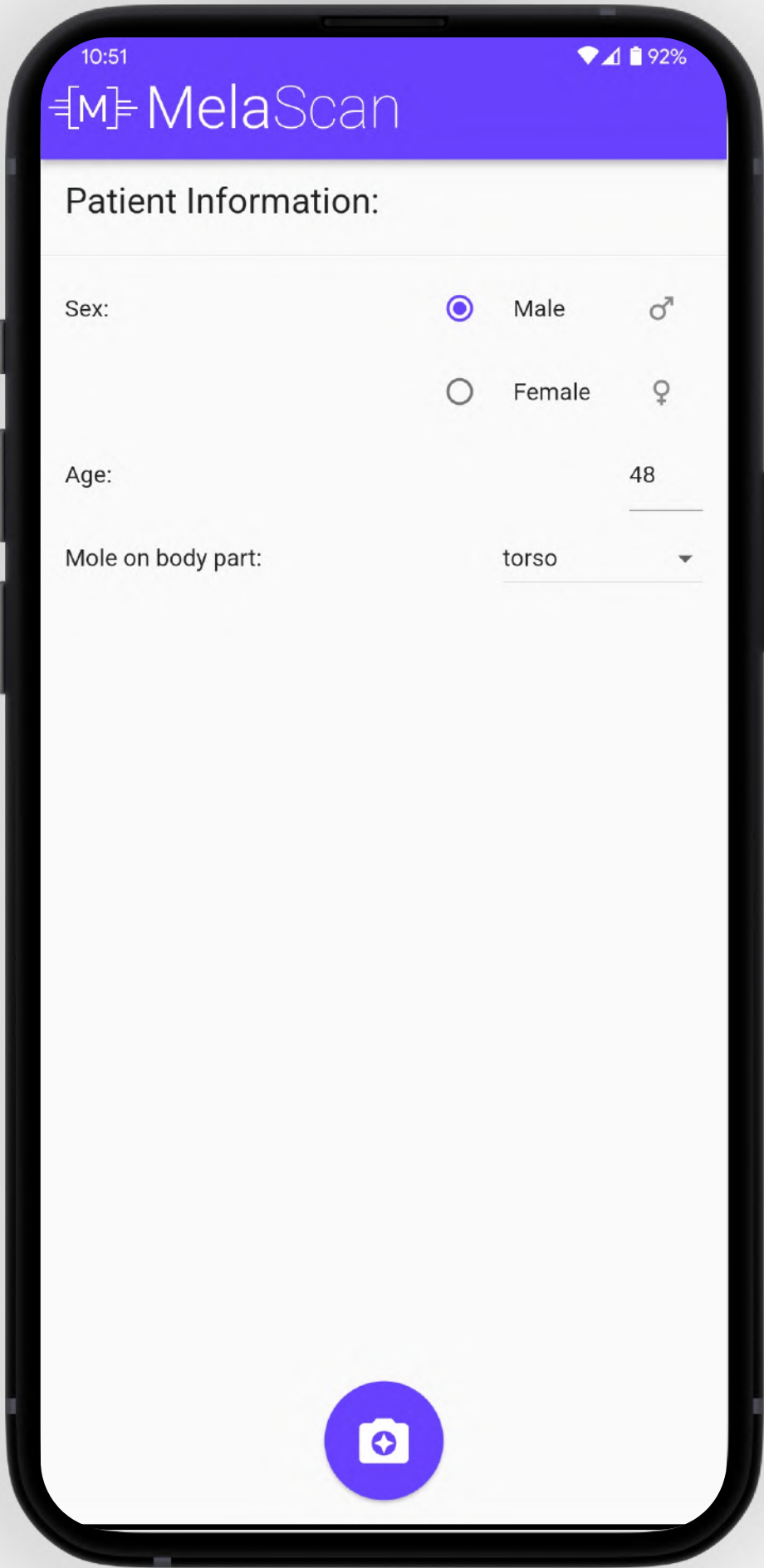
≈5 Minutes

dermatologist's inspection for ONE mole from experience

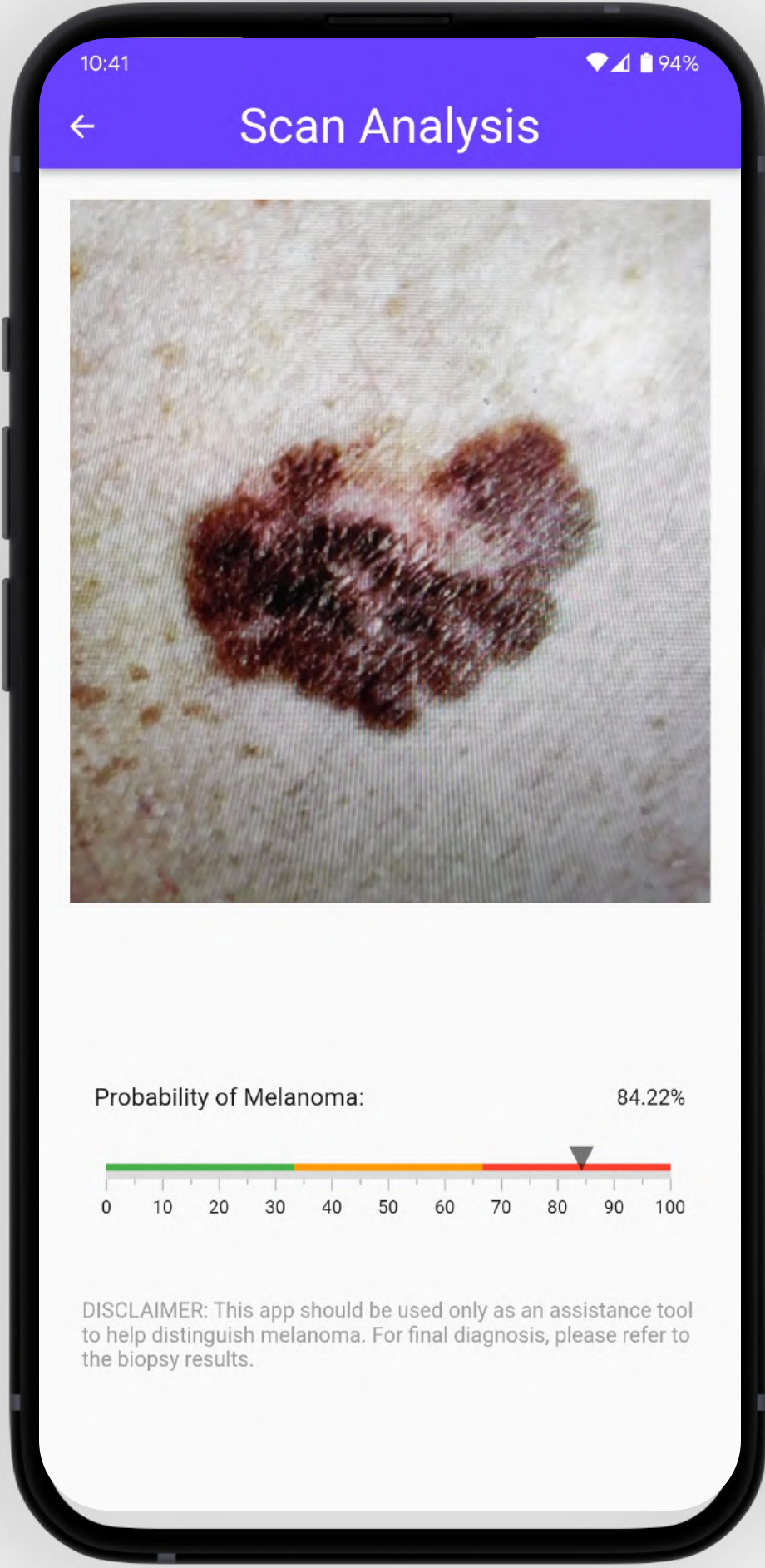
Solution

LIVE DEMO

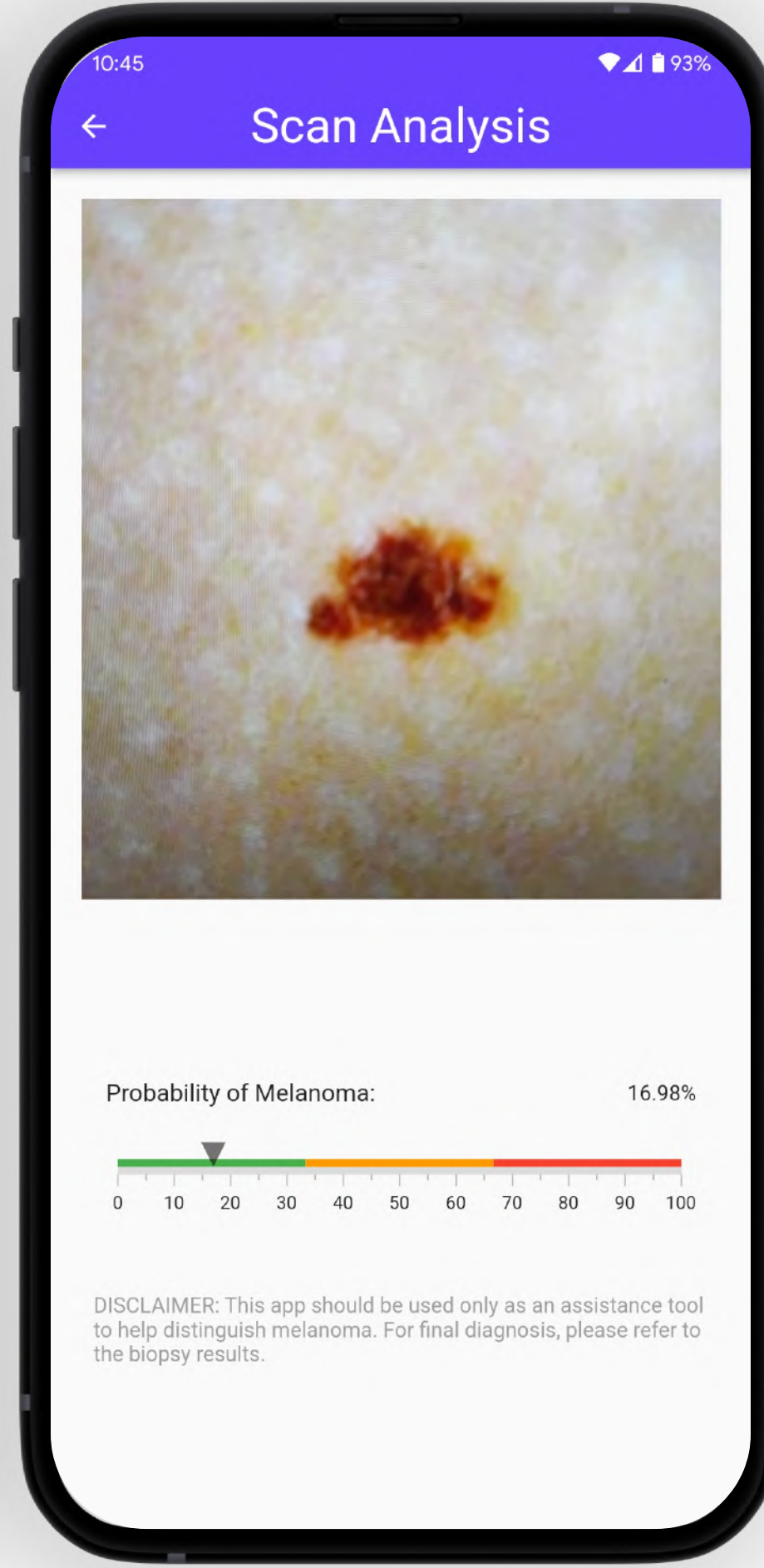




Patient data



Positive case of Melanoma



Negative case of Melanoma

Implementation

Data

Augmentation

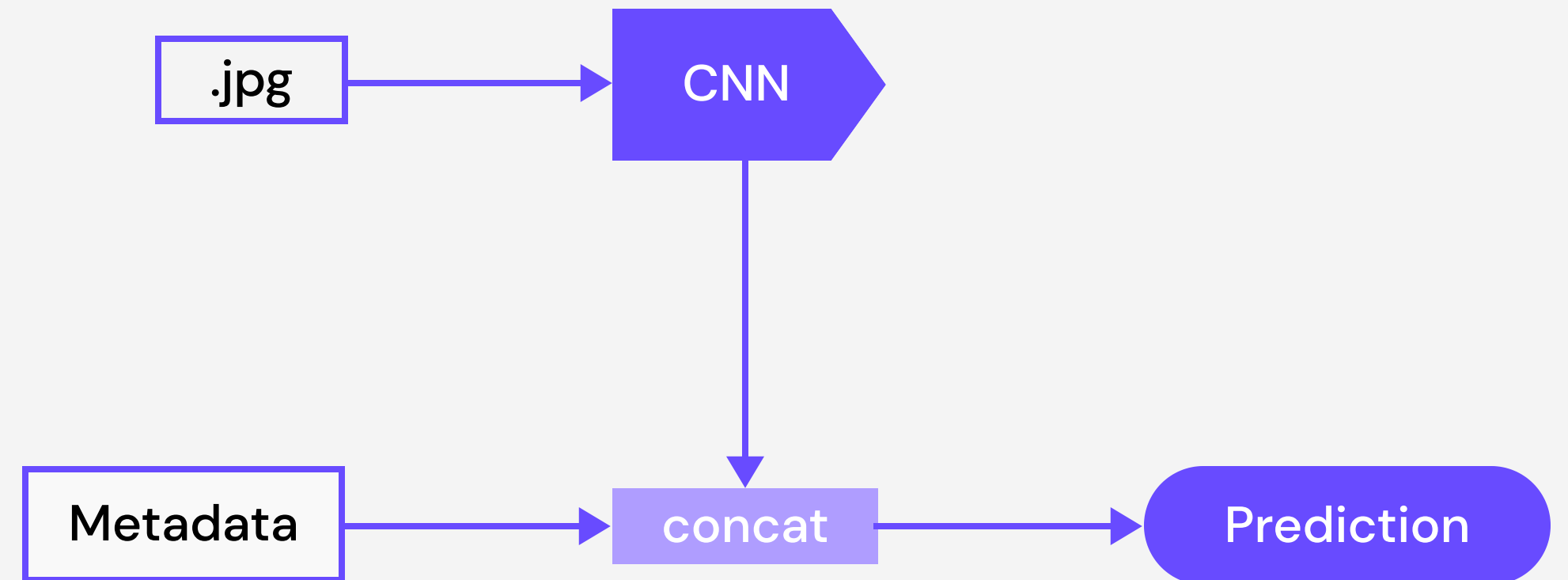
Merge

Noise reduction (not implemented)

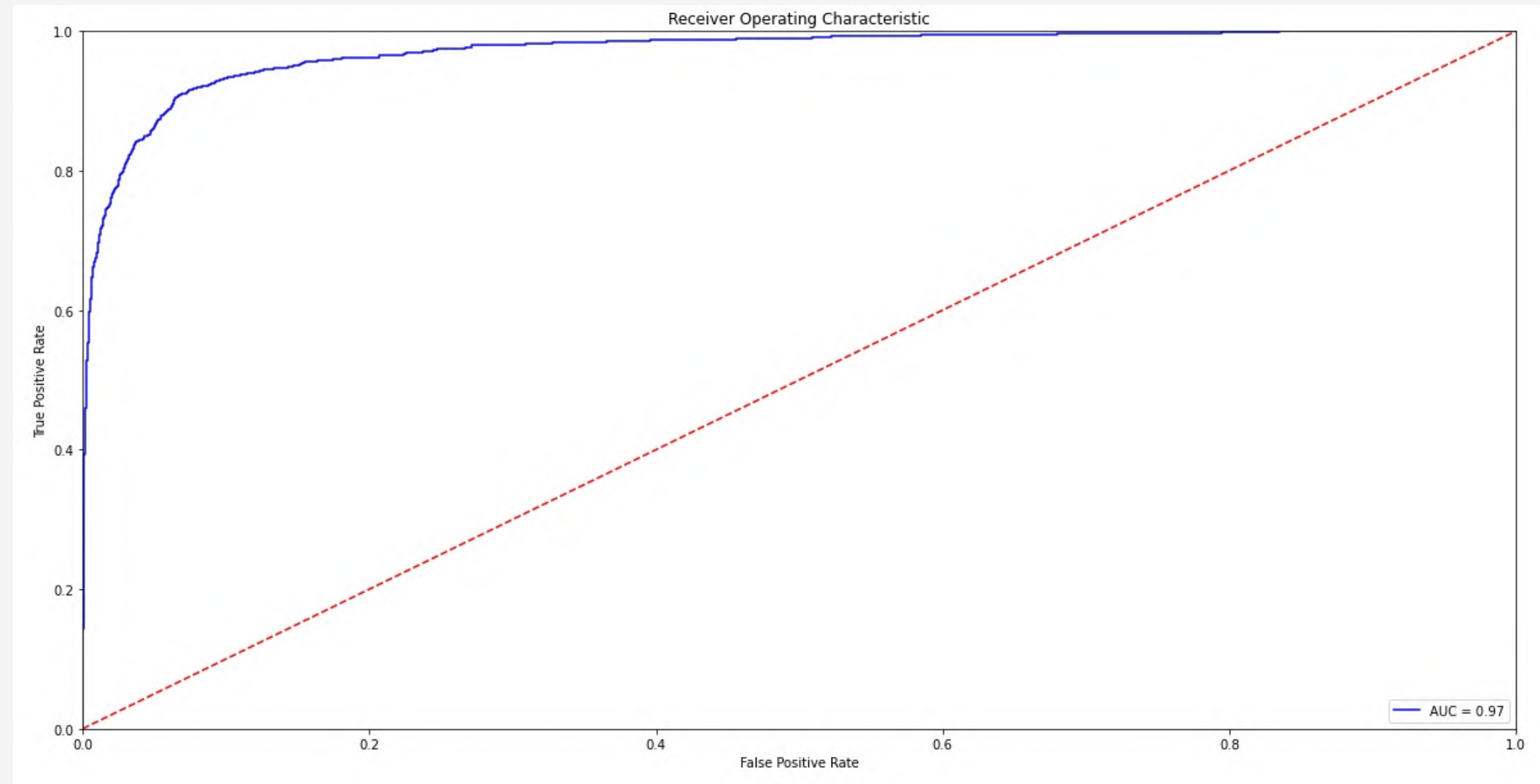
Model

Ensemble Model

Metadata



Basic Model Architecture



Add time dimension

Use set of pictures over time

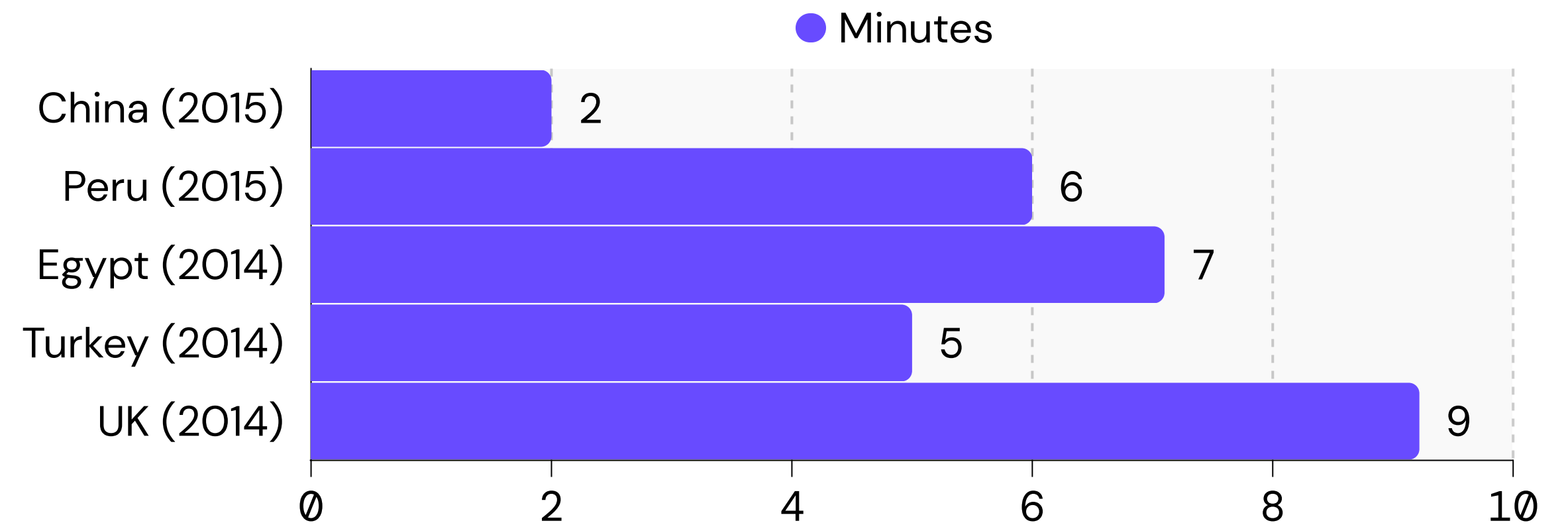
Data gathering

Use the app to collect new (labeled) data

Global Impact



Avarage Consultation Time with General Practioner

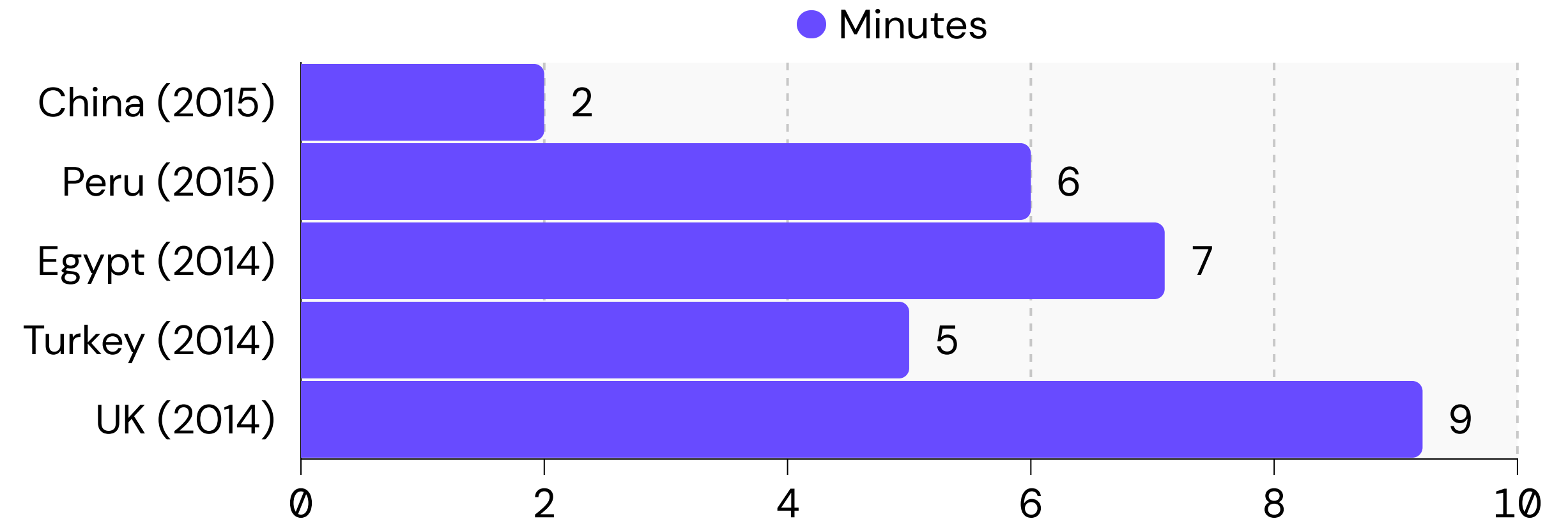


BMJ Data 2017



Avarage Consultation Time with General Practioner

BMJ Data 2017



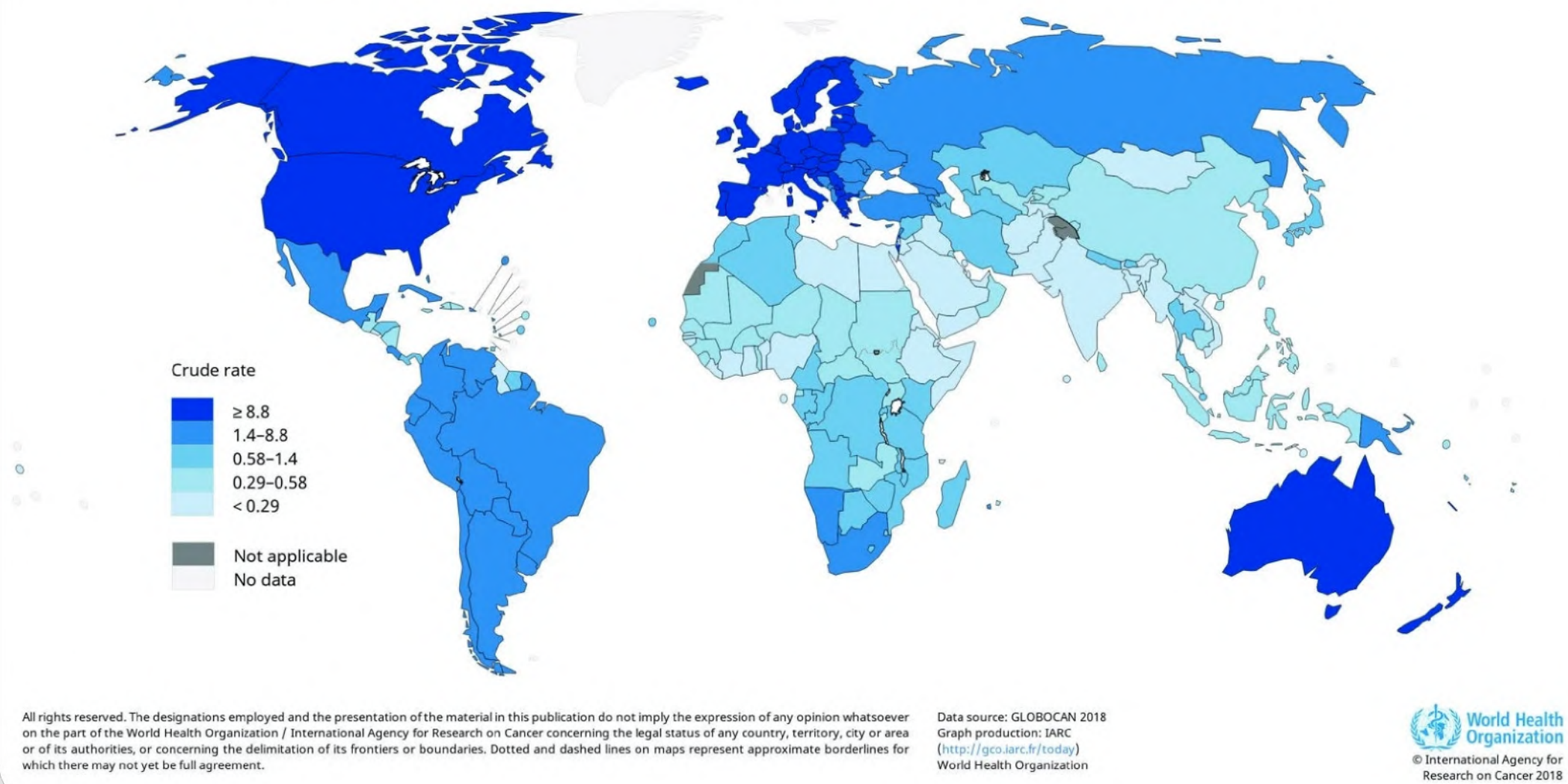
Problem: GLOBAL



Solution:
easy to use and **accessible** for all



Estimated crude incidence rates in 2018, melanoma of skin, both sexes, all ages



Reduce Workload of
Global General Practitioners

Higher Early-Stage
Diagnose-Rate Worldwide



Joong-Won Seo
Developer



Lucas Garay
AI Healthcare



Zihang Sun
Business Development



Cindy Yoseffa
Medical Student