TumAI

A virtual assistance for tumor diagnosis

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Introduction

- **Overview:** Brain tumor type:
  - Gliomas: common type, 33% of all brain tumor
- **Standard procedure:**

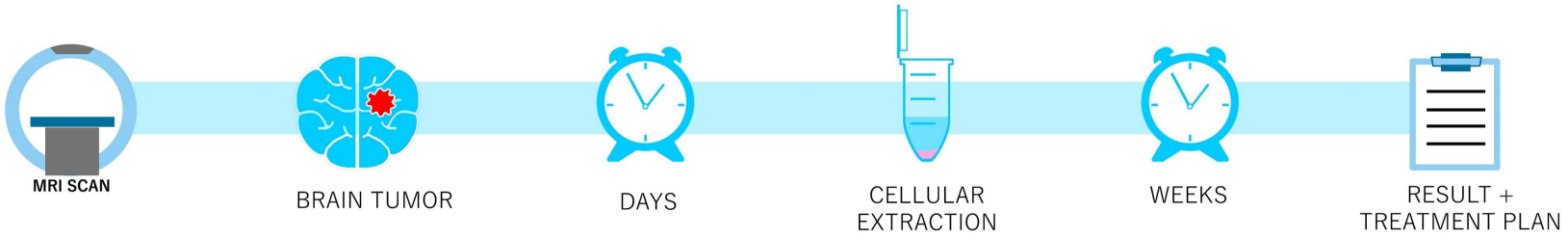


Figure 1: Brain tumor

Source: https://storage.googleapis.com/kaggle-media/competitions/RSNA-2021/image2.png

Problems:

1. Invasive diagnoses:

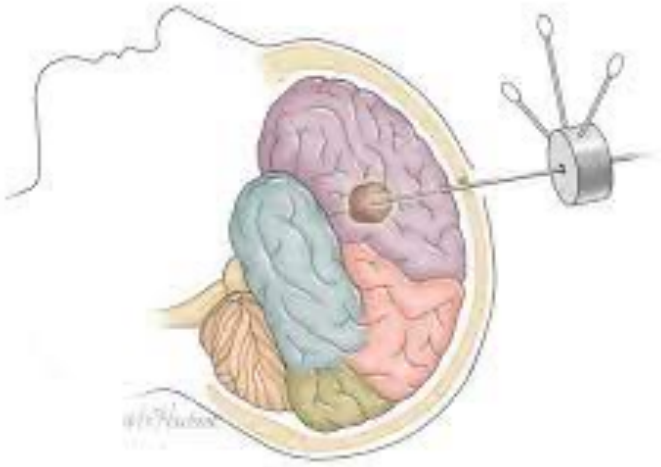
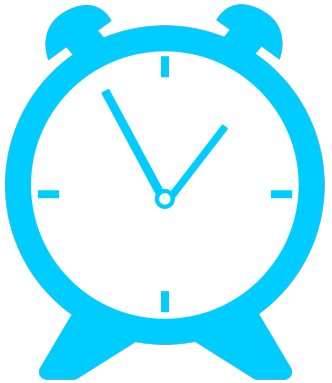


Figure 2: Stereotactic Brain Biopsy

2. Time:



Source: https://www.uchealth.com/wp-content/uploads/2013/01/Stereotactic-Biopsy2.pdf

How to tackle it?

- **Goals**: minimize
  - Number of surgeries
  - Waiting time
- **Solutions**: **TumAI**
  - ML cloud-based medical software
  - Predict and classify genetic characterizations of the tumor
  - Generate possible treatment strategies

Why TumAI ?

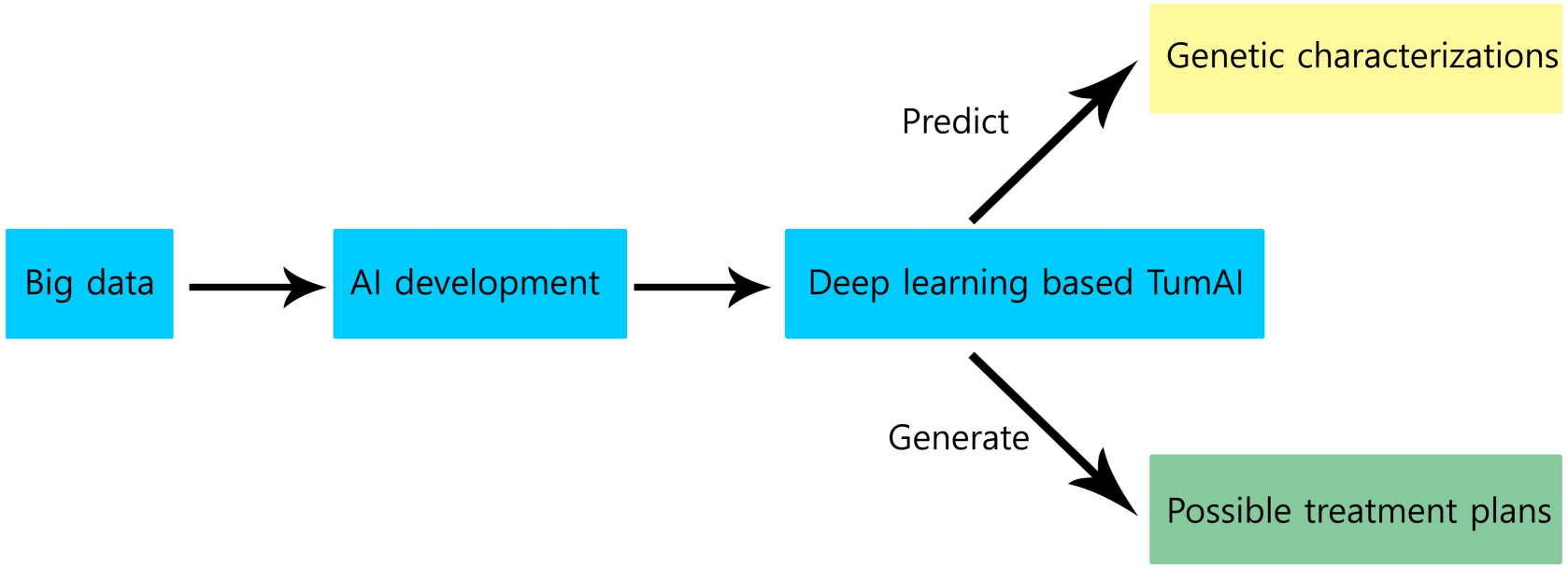


Figure 3: Deep learning-based TumAI

Prospective Clinical Deploy

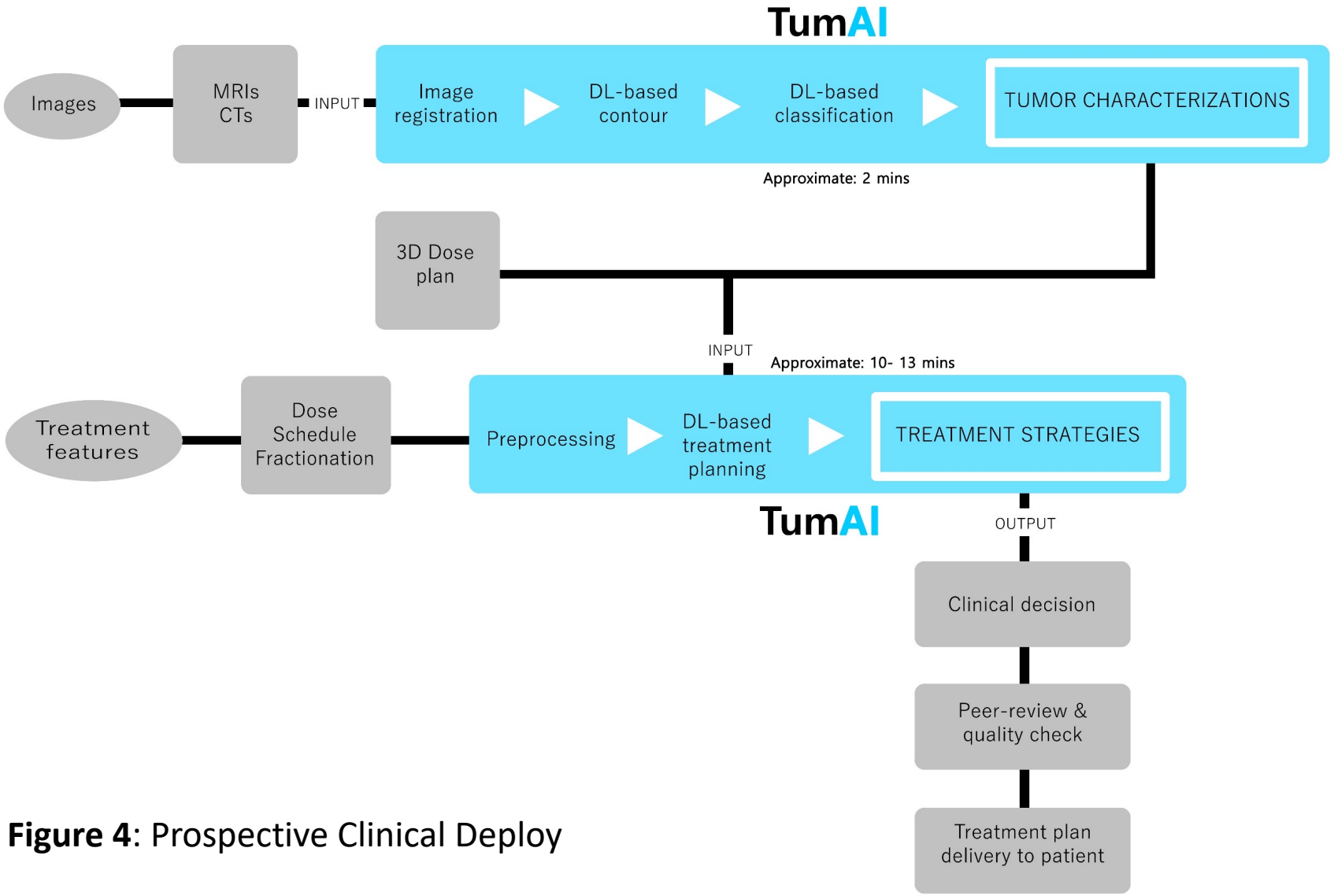


Figure 4: Prospective Clinical Deploy

Current Markets and Competitions

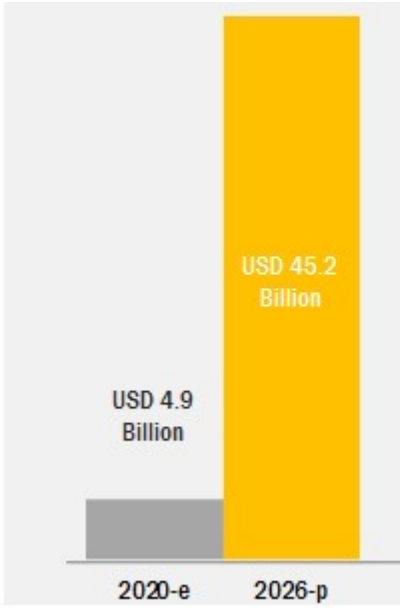


Figure 5: Opportunities in AI Healthcare Market

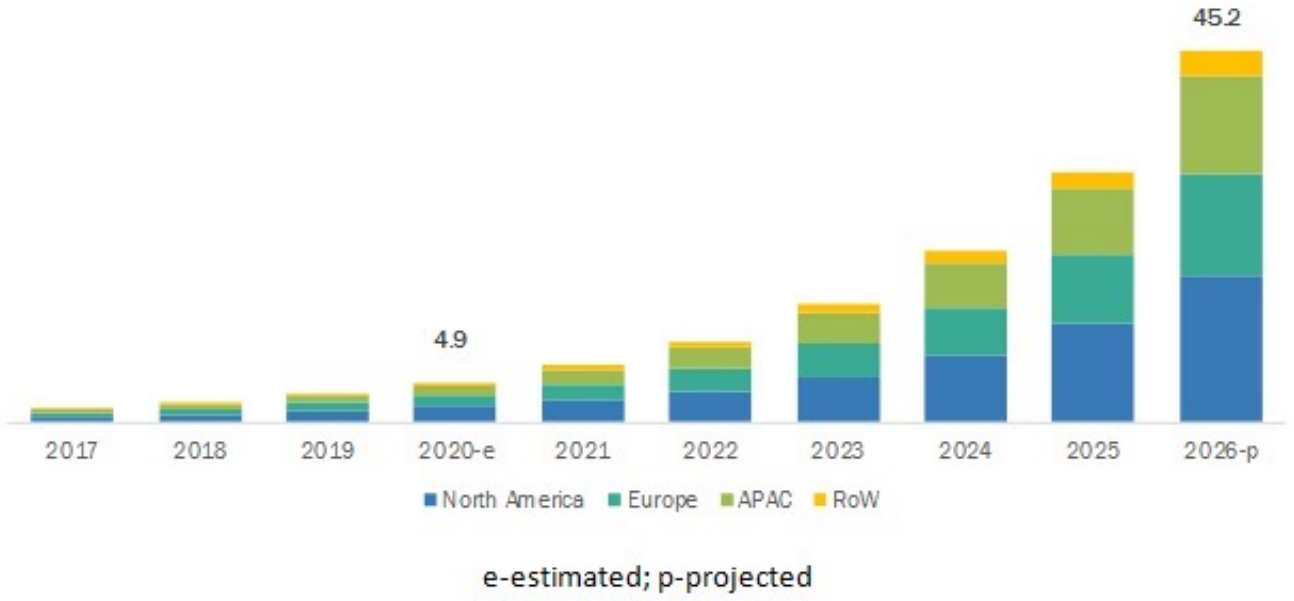


Figure 6: AI in Healthcare Market By Region

Sources:

1. https://www.marketsandmarkets.com/Images/artificial-intelligence-healthcare-market9.jpg
2. https://www.marketsandmarkets.com/Images/artificial-intelligence-healthcare-market-by-region.jpg

Our targets

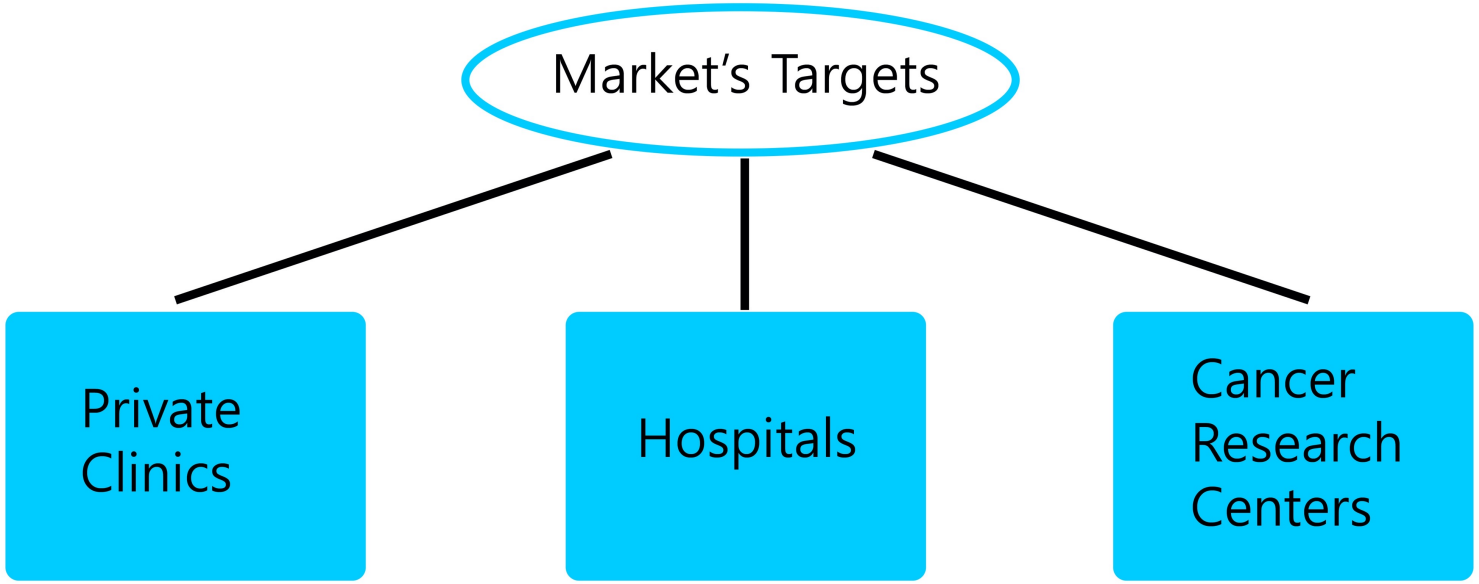
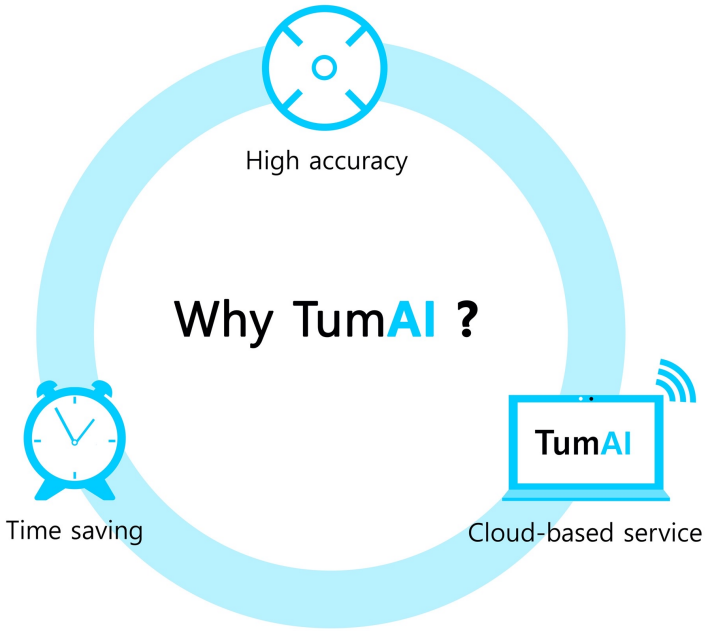


Figure 7: Market's targets

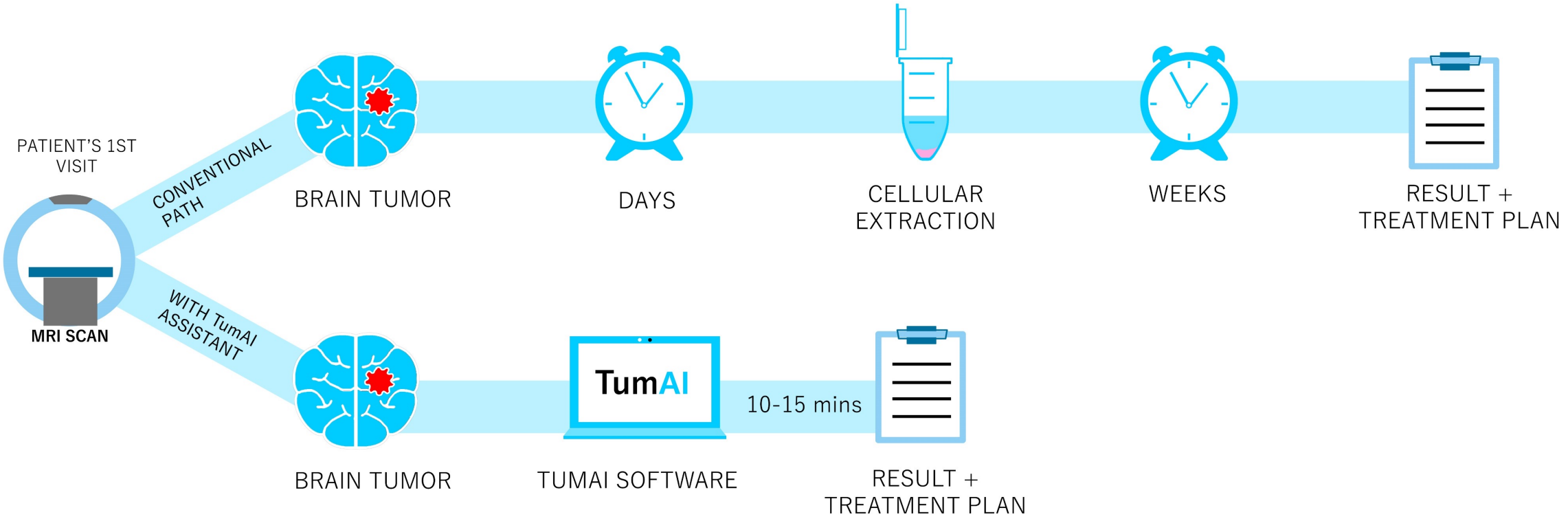
Our Competitive Advantages

- Our competitors:
  - **Limbus AI**: automatic contouring software for radiation therapy
  - **MIRADA**: software package for automatic contouring, diagnostic imaging, and interventional radiology

Our advantages:



Summary


PATIENT'S 1ST VISIT
MRI SCAN
CONVENTIONAL PATH
WITH TumAI ASSISTANT
BRAIN TUMOR
DAYS
CELLULAR EXTRACTION
WEEKS
RESULT + TREATMENT PLAN
BRAIN TUMOR
TumAI
10-15 mins
TUMAI SOFTWARE
RESULT + TREATMENT PLAN