Development of an AI-enabled Clinical Decision Support System for Hepatocellular Carcinoma Patients

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Technology & Stage of development

Clinical notes from MIMIC-IV and TCGA-LIHC

LLM processing

NE framework

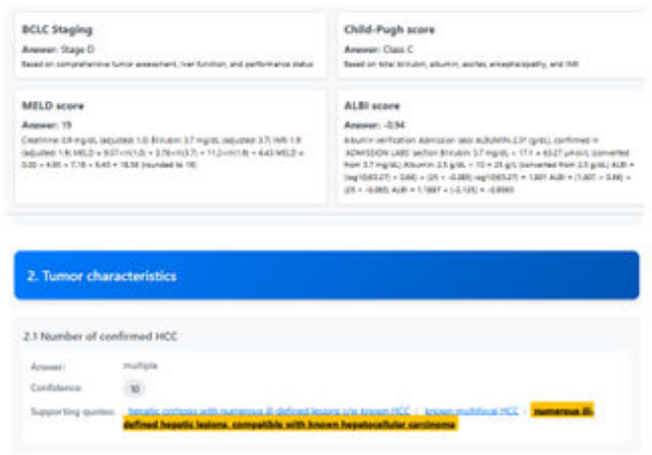
Tumor burden

Laboratory results

Treatment availability

Comorbidities

Ground Truth Labelling framework



Clinical dashboard

Liver function

BCLC staging

Treatment recommendations

94% accuracy for Child-Pugh class

100% accuracy for BCLC staging

>90% accuracy for granular data

Key advantage and Opportunity

Generalization

- Different types of clinical documents for generalization

Versatility and adoptability

- Applicable for online and offline LLMs
- Suitable for wide range of clinical and research applications

Clinical Relevance

- Engagement with clinical specialists to provide evidence-based BCLC staging and treatment recommendation
- Clinical dashboard for clinician verification and gatekeeping

Market Potential and scalability

- Tailored to local and overseas public healthcare settings

Intellectual Property

- **Patent** application/Copyright for IP protection
- **Licensing agreement** with HA for territory-wide adoption
- **Commercialization** with spin-off company targeting private hospital, private healthcare provider and other institutions
- Peer-review journals, Conferences, Other Dissemination

High accuracy and reliability

- First validated AI tool addressing technical challenge of AI adoption in HCC care

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