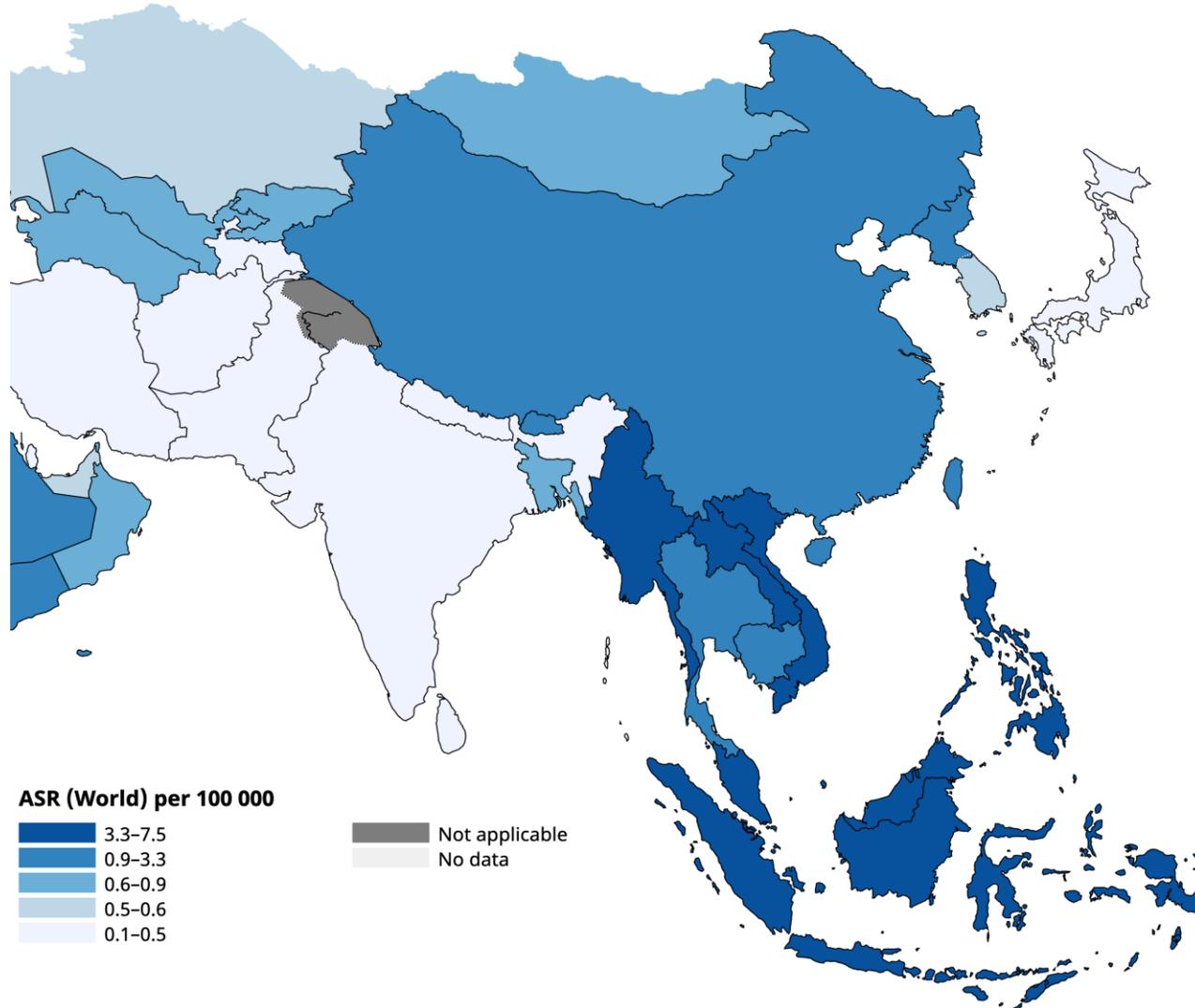


AIM-C06-2025

**DEVELOPING A PREDICTIVE CLASSIFIER
FOR TUMOUR RECURRENCE IN
NASOPHARYNGEAL CARCINOMA (NPC)**

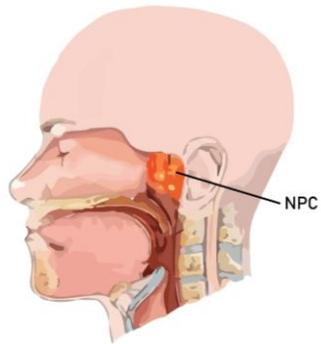
Malaysia is an endemic region for NPC (ranks fourth globally in incidence)

Age-Standardized Rate (World) per 100 000, Incidence, Both sexes, in 2022
Nasopharynx

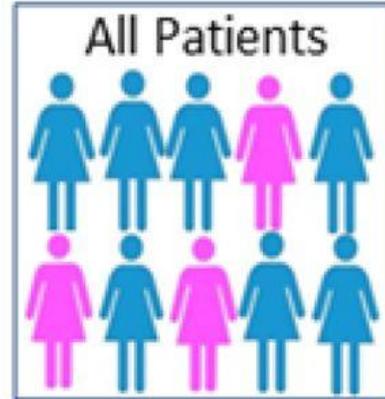


Ranking	Population	ASR (World)
1	Maldives	7.5
2	Brunei Darussalam	6.4
3	Indonesia	6.1
4	Malaysia	5.9
5	Singapore	5.4
6	Timor-Leste	5.0
7	Viet Nam	4.7
8	Lao PDR	3.8
9	Myanmar	3.5
10	Philippines	3.5
11	China	2.4
12	Thailand	2.2
13	Cambodia	2.1
14	Bhutan	1.7
15	Yemen	1.5

NPC: among top ten cancers in Malaysia



treatment



Cancer-free

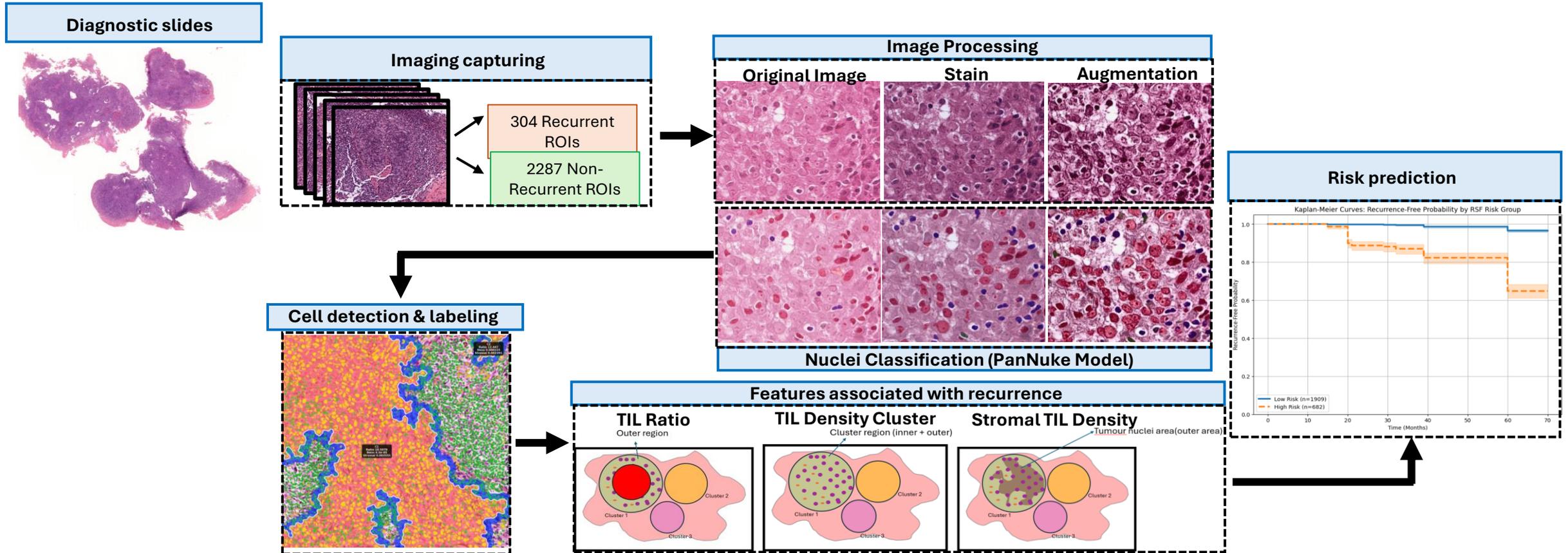


Cancer comes back

? Predictive classifier

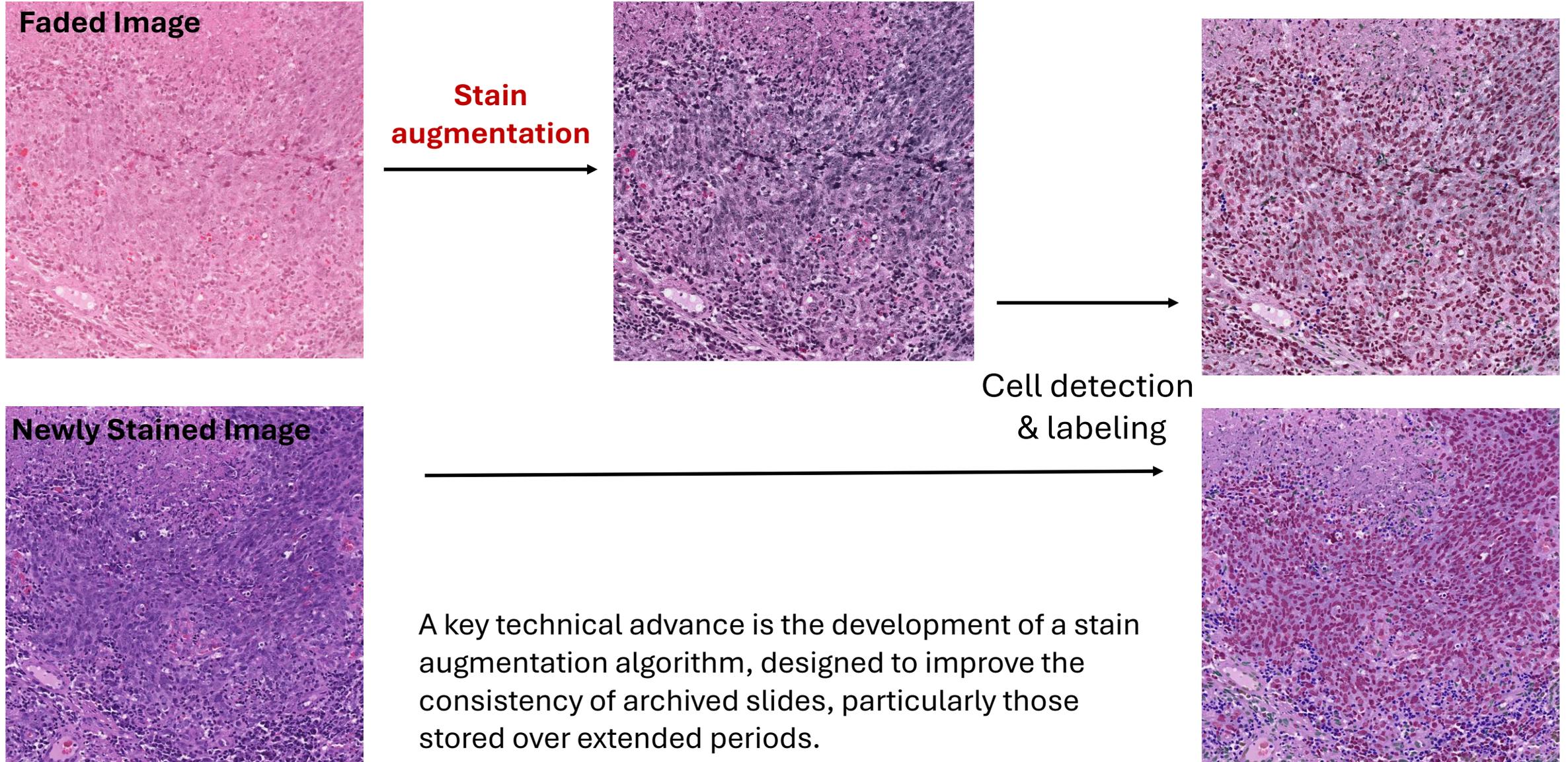
While early-stage NPC is often treatable, tumour recurrence occurs in a substantial proportion of patients and frequently leads to distant metastasis, the leading cause of death. Clinicians currently lack reliable tools to identify high-risk patients.

AI-Enabled Prediction of Tumour Recurrence in NPC



This project addressed this gap by developing an AI-based system to predict tumour recurrence using standard diagnostic slides from routine clinical care. The core innovation is a multi-model AI pipeline that extracts and integrates image-based features associated with recurrence.

New Algorithm for Stain Augmentation



A key technical advance is the development of a stain augmentation algorithm, designed to improve the consistency of archived slides, particularly those stored over extended periods.