PhD studentship proposal: *Judging exchangeability of evidence to support HTA* (M Soares, Saramago P, Jancovik D)

Closely after obtaining regulatory license for particular indications, health technologies are typically appraised by health systems for clinical and economic value in a particular indication, to support funding decisions. This is called Health Technology Assessment (HTA). Standard practice is that the evidence supporting HTA is product- and indication-specific, with the main source being the clinical trial that supported the regulatory approval process.

By focussing on a product in a particular indication, HTA appraisals are often subjected to a high level of evidential uncertainty on final endpoints, even where considerable evidence exists i) on the same technology for other indications (multi-indication context), or ii) on similar technologies (e.g. of the same therapeutic class) within the same indication. An MRC funded project, starting in July 2022, will explore evidence synthesis approaches to make better use of evidence across, as well as within, indications in oncology. This implies the sharing of information[https://doi.org/10.1186/s12874-021-01292-z] across indications, which would reduce decision uncertainty across the existing indications and providing more realistic predictions of the value of the oncology drug in future indications. An important component of this MRC work will be to develop methods for the formal elicitation of the judgment of clinical experts to support multi-indication HTA.

The PhD studentship on offer here will aim to extend the methods development beyond that of the MRC project which specifically looks at multi-indication oncology drugs. The PhD could focus on exploring the plausibility, and value, of considering exchangeability of evidence i) across products, for example, in informing the extrapolations required for determining the value of advanced medical products like CAR-T technologies [https://doi.org/10.3310/hta21070]; ii) for non-indication specific, non-therapeutic technologies such as Multi-Cancer Early Detection (MCED) tests, or iii) for site-agnostic products, for which decision making is not indication-specific and present an evidence-base built on multi-indication basket trials [https://doi.org/10.3310/hta25760]. This is likely to require a focus on evidence synthesis methods and/or expert elicitation methods, and the integration of methods development in these areas with decision modelling.