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| Project Reference | T3/76 |
| Project Title | **Developing a National Clinical Standardised Novel Classification System for Retinoblastoma** |
| Theme(s) | Theme 3: Genetically informed causal inference and risk prediction |
| Supervisors | **Dr Zhanhan Tu (University of Leicester)** [**zhanhan.tu@le.ac.uk**](mailto:zhanhan.tu@le.ac.uk)  Prof Julian Barwell (University of Leicester)  Prof Mandeep Sagoo (UCL)  Dr Mervyn Thomas (University of Leicester) |
| Department | Psychology and Vision Sciences |
| Project Summary | Retinoblastoma (Rb), the most common intraocular malignancy in young children, presents enduring challenges, including vision impairment, physical deformities, and psychosocial struggles for survivors. The exploration of genetic variations influencing Rb's development and characteristics provides a unique insight into the underlying biological mechanisms, offering improved patient management and outcome prediction. By utilising cutting-edge technology and extensive datasets, we have a unique opportunity for ground-breaking discoveries.  Our project pioneers innovative genotype and phenotype approaches to classify Rb, opening the way for further clinical investigations. As part of this study, you will engage with a fascinating array of novel datasets and analytical techniques, enhancing your skills across diverse fields. In addition to clinical data collection and genetic association analyses, you will learn ophthalmic imaging analyses and interpretation, deepening your comprehension of the findings and their links to genes and biological pathways. Depending on your interests, you may also explore data analyses utilising machine learning approaches.  Throughout this journey, you will receive unwavering support from supervisors and collaborators across multiple institutes and hospitals, all of whom possess expertise in the methodologies and datasets that underpin this transformative project. |