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| Host department: QMUL |
| Project Title: |
| Understanding and optimising management of cancer risk in symptomatic patients with possible bladder and kidney cancer |
| Proposed supervisory team: |
| Dr Yin Zhou (QMUL) GP and NIHR Academic Clinical Lecturer with with expertise in diagnostic safety research, in particular relating to examining diagnostic processes and outcomes in bladder and kidney cancer. She has extensive experience of working with linked primary care and Cancer Registry data such as the ones which will be used in this PhD.  Dr Wei Shen Tan (UCL) Academic urologist with an interest in improving risk stratification of patients with urological symptoms, especially haematuria. His work has also resulted in the development and validation of a risk prediction tool for patients with haematuria in the secondary setting, which we will be evaluating and validating in this study in the primary care setting.  Prof Fiona Walter (QMUL) Professor of Primary Care Cancer Research, and Director of the Wolfson Institute of Population Health at QMUL with considerable primary care cancer expertise especially in early cancer diagnosis research. |
| Potential for cross consortium networking and educational opportunities: |
| The supervisors have developed collaborations and work with multi-disciplinary colleagues from different institutions and organisations across the UK (and internationally), which provide excellent opportunities for learning, networking and collaborations. For example, these networks include:   * NIHR School for Primary Care Research * Cancer Research UK * Bladder cancer charities through our PPI networks |
| Project description: |
| This PhD is embedded within a larger programme of work looking to optimise cancer care pathways of symptomatic patients with bladder and kidney cancer.  Although visible haematuria (VH) is the main alarm symptom for cancers of the urinary tract, many patients with bladder and kidney cancer present with lower-risk symptoms, including urinary tract infections (UTIs) and non-visible haematuria (NVH). However, the management of patients with lower-risk symptoms for these cancers is suboptimal, and patients with haematuria have different levels of cancer risk. Current National Institute for Health and Clinical Excellence (NICE) guidelines suggest a fast-track two-week-wait referral for patients with VH, and those with NVH and dysuria, and to consider a routine referral in those with recurrent or persistent UTIs. However, the definitions of ‘recurrence’ and ‘persistence’ is not clear, which may result in inconsistent referral practices of general practitioners (GPs). For patients re-presenting with haematuria, the frequency and timing of further investigations is also unknown. The unclear risk of bladder or kidney cancer in patients with recurrent UTIs and NVH may cause diagnostic uncertainty and therefore making referral decisions, monitoring and safety netting challenging in primary care.  In this study, we hypothesise that bladder and kidney cancer risk increases with increasing number of episodes of “lower-risk” symptoms. The overarching aim of the PhD is to understand cancer risk and improve risk stratification of patients with recurrent lower-risk symptoms of bladder/kidney cancer, in order to minimise diagnostic uncertainty and inform personalised, risk-stratified management approaches. The study consists of two objectives:  1: To estimate the positive predictive values of UTI and NVH for bladder and kidney cancer, for single and repeated episodes.  2: To develop and validate an improved risk prediction tool as a triage tool for further investigations for bladder and kidney cancer in the primary care setting, based on a model already validated in secondary care. |
| Training and development provision by host: |
| *Formal training:*  Formal training: QMUL has an extensive professional development programme to support PhD students (<https://www.qmul.ac.uk/doctoralcollege/phd-students/training/>). At the start of the PhD, we will undertake a training needs assessment to build a bespoke training package to support the student. |
| *Informal training:*  The PhD will be carried out within a supportive multi-disciplinary environment at QMUL, which consists of statisticians, data scientists and clinicians. Successful candidates will be supported to take up informal training and familiarisation with the coding, data preparation and management of the data sets in use for this PhD, through the supervisors and their collaborators. There are also informal training opportunities such as through attending workshops, seminars and conferences across the University, and wider cancer early diagnosis research community (e.g. Cancer Research UK). |
| *PPIE*:  This programme of work has been developed in collaboration with our existing PPIE network, including cancer charities, cancer survivors and their carers. Their input will be embedded throughout this work and the PhD candidate will have the opportunity to work closely with the PPI members. |