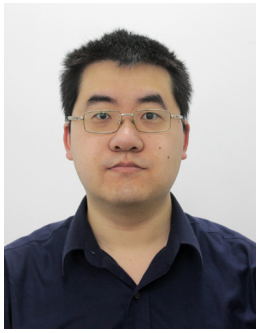
Awareness among pathologists of National Cancer Research Institute Clinical Studies Groups

Top-class clinical research requires seamless collaboration between front-line teams and supporting laboratories. This article reports on a survey of pathologists, examining whether there are barriers to this optimal approach.



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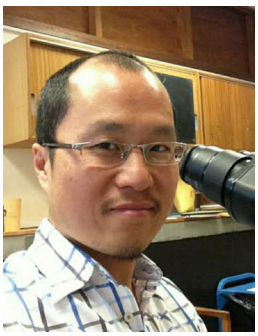

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Background and aim

High-quality pathology is a key factor for modern clinical trials – it is required for patient selection, stratification, quality control including biomarker evaluation, and assessment of end points.[1,2] The roles pathologists play in this setting are diverse, including pathology review, translational research and tissue banking, as well as participation in protocol design and trial management such as trial management groups (TMGs) and trial steering committees (TSCs).[3–6] Emerging specific tissue-based diagnostics and biomarker-driven clinical trials, for example in breast cancer,[7] represent novel avenues where pathologists make considerable contributions to clinical trials.

In the UK, National Cancer Research Institute Clinical Studies Groups (NCRI CSGs) are a central part of cancer research infrastructure, where clinicians, scientists, statisticians and lay representatives are brought together to coordinate the development of a strategic portfolio of clinical trials within their field. They also interact with clinical research networks, funders and researchers.[8] The NCRI CSGs comprise 18 main groups, all of which also include one or more subgroups (64 in total). There is concern, however, that cellular pathologists are not sufficiently engaged with those groups despite the general need for pathology and translational research input in the majority of CSGs. Furthermore, it is hypothesised that a significant proportion of practising pathologists are not aware of CSGs and their functions; and that, among those who are aware, barriers exist preventing participation.

The Cellular Molecular Pathology (CM-Path) initiative was launched in 2016 in a collaborative venture between ten of the NCRI's partner organisations.[9] Being one of the strategic goals of the CM-Path Clinical Trials Workstream, an online survey was undertaken to investigate the participation of UK pathologists in various CSGs, with a long-term objective to encourage the integration of pathologists into the wider cancer research landscape.

Methods

An anonymous online survey was developed and circulated between 22nd May and 3rd July 2017. Invitations were sent via the Royal College of Pathologists and Pathological Society of Great Britain and Ireland mailing lists. The questions comprised a mixture of single-choice and free-text answers. Tabulated survey results and descriptive statistics were performed. The exact numbers of pathologists on each of the CSGs were retrieved from the NCRI Registry in August 2017.

Results

There were 143 respondents, representing approximately 6.5% of UK-based cellular pathologists on the mailing lists (n=2,200). The majority (73%, 104/143) were consultant pathologists, followed by trainees (21%, 30/143) (Figure 1A); 67% (96/143) of the respondents were employed by teaching hospitals with or without District General Hospital (DGH) and university appointments (Figure 1B), and 45% (64/143) were involved in research (Figure 1C).

Seventy seven percent (111/143) of the respondents were not current CSG members (Figure 1D), and 60% (86/143) were not aware of CSGs (Figure 1E). However, 83% (71/86) of those not aware of CSGs would like to learn more about them.

The current representation of pathologists on the main CSGs and subgroups is summarised in Table 1. Lung and Bladder & Renal CSGs have no pathology representation. CSGs with one pathologist member are Prostate, Skin Cancer, Teenage & Young Adults (TYA) and Germ Cell Tumours. Pathology representation is not deemed necessary on the CSGs on Primary Care, Psychosocial Oncology and Survivorship, and Supportive & Palliative Care.

The main barriers that prevented respondents from joining CSGs were time constraints (74%, 25/34), lack of knowledge of CSG activities (56%, 19/34) and lack of remuneration (24%, 8/34). Only 15% (5/34) expressed a lack of interest in CSGs. Regarding ways to ensure good representation

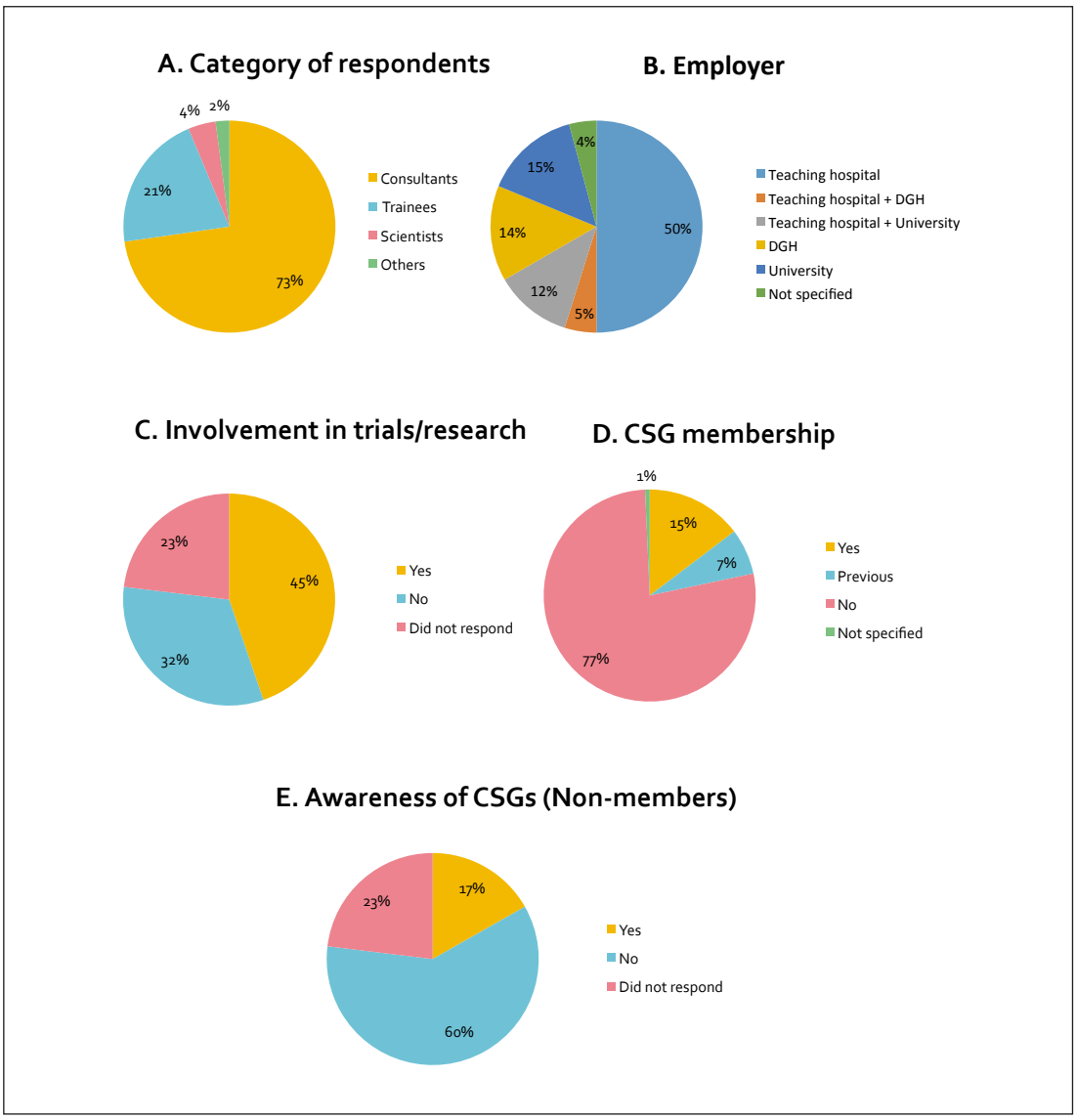

Figure 1: Survey population. (A) Respondents categorised by grade; (B) respondent's main employers; (C) involvement in clinical trials or research; (D) CSG membership; (E) the awareness of CSGs among non-members.

of pathologists in CSGs, respondents suggested advertisement and communication (34%, 17/50), raising awareness among pathologists (20%, 10/50) and allowances/rewards (e.g. time, financial, publications) (16%, 8/50) as being important.

For those who are or had been CSG members, most learnt about them through direct email notifications. It is worth noting that almost all of these previous or current CSG members declared that they benefited from the membership, from either personal or professional perspectives. These benefits included presentations to CSGs and raising awareness of pathology issues for non-pathologists (23%, 7/31), protocol and biomarker development (19%, 6/31), networking (10%, 3/31) and publications (6%, 2/31).

Discussion and conclusions

To our knowledge, this is the first survey to gauge pathologists' interest and involvement with NCRI CSGs. The survey has identified several CSGs/subgroups with no pathology representation despite pathological and molecular assessment of tissue being critical to determine eligibility for many emerging novel treatments. This justifies the need for targeted recruitment by relevant partner organisations including NCRI. There is also a lack of awareness of the role and functions of CSGs among pathologists despite expressed interest in these groups and their activities when made aware. Current strategies employed by CM-Path to improve awareness among the pathology workforce include the annual Clinical Trials day, regular newsletters and the newly created CM-Path clinical trials forum.[10] These strategies have recently led to an increase in the number of pathologists serving on main CSGs and their subgroups. In addition, CSGs currently offer a trainee scheme with opportunities for junior pathologists to participate, with mentoring.

Our survey highlights opinions familiar in the pathology community, where lack of time, knowledge of clinical trial networks and remuneration prevent pathologists from participating in clinical trial-related work, and academic activities in general. Providing adequate support to cellular pathologists and trainees, particularly to join CSGs, will help to ensure high-quality pathology for clin-

Table 1: Distribution of cellular pathologists among NCRI Clinical Studies Groups (CSGs) and subgroups. The main CSGs are highlighted in bold font. The number of cellular pathologists in each CSG or subgroup, if present, is denoted in bracket. *Includes one trainee member; **The same member sits on the main CSG.

Brain (2)	**Breast (3)**	**Children's Cancer and Leukaemia (1)**
Glioma	Translation & Imaging (5)	Central Nervous System (CNS) (1)
Meningioma Metastasis & Other Tumours	Advanced Disease	Leukaemia
Supportive & Palliative Care	Early Disease	Germ Cell Tumour (1)
	Symptom Management	Neuroblastoma
		Novel Agents

Colorectal (2)	**Gynaecological (2*)**	**Haematological Oncology**
Surgical	Cervix / Vulva (2)	CLL
Screening & Prevention	Endometrial (1)	CML (1)
Advanced & Adjuvant (1)	Ovarian (2)	AML
Anorectal Cancer (1)		ALL
		MDS
		MPD/MPN (1)
		Myeloma

Head and Neck (3)	**Lung**	**Lymphoma (1)**
Thyroid (1)	Screening and Early Diagnosis	Low Grade Lymphoma
Systemic Therapy & Radiotherapy	LOcoRegionalDisease (LORD)	High Grade Lymphoma (3)
Epidemiology and Survivorship	Mesothelioma	Hodgkin Lymphoma (1)
Surgery & Localised Therapies (1)	Advanced Disease	Paediatric Non-Hodgkin Lymphoma

Primary Care	**Prostate (1)**	**Psychosocial Oncology & Survivorship**
Early Diagnosis	Localised Disease (1**)	Understanding and measuring consequences of cancer and its treatment
Survivorship	Advanced Disease	Lifestyle and behavioural change
Screening		Interventions to improve outcomes in people affected by cancer

Sarcoma (1)	**Skin cancer (1)**	**Supportive & Palliative Care**
Bone Tumour	Non-Melanoma Skin Cancer	Early stage disease and acute treatment toxicities
Young Onset Soft-tissue Sarcoma (YOSS) (1)		Advanced disease and end of life
		Survivors and late consequences

TYA & Germ Cell Tumours (1)	**Bladder & Renal**	**Upper Gastro-Intestinal (1)**
Biological Studies	Penile Cancer	Hepatobiliary
Health Services Research (HSR)	Bladder - T2 & below	Pancreatic
Quality of Life & Survivorship	Bladder - Advanced Bladder Cancer	Oesophagogastric (1)
	Renal - Surgical	Neuroendocrine
	Renal - Systemic Treatments Working Party	

ical trials in the UK; and the Chief Medical Officers and colleagues have recently emphasised support for doctors undertaking national work.[11] Rapidly increasing demands for innovative pathology testing requires close interaction between clinical trialists and pathologists to ensure successful trial design and delivery.

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