ELECTIVE (SSC5a) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

Piotr Sokalski, Elective Report

Neoplastic occurrences in Poland parallel those observed in the UK, with prevalent malignancies including breast, lung, and colon cancers among women, and prostate, lung, and colon cancers among men, respectively. The oncology centre where I conducted my elective placed particular emphasis on the diagnosis and management of breast cancer. In Poland, this malignancy accounted for over 21,000 diagnoses (incidence rate: 57/100,000) and 6,400 deaths in 2021[i]. It stands as the most prevalent neoplasm among women aged 19 and above, with an average 5-year survival rate of 74% [ii]. In Poland, it has shown an ever-increasing incidence over the last 50 years, however with variable pattern. Notably, breast cancer incidence has exhibited an upward trend over the past five decades in Poland, albeit with variable patterns. While an initial surge in mortality rates was observed until the mid-1990s, subsequent years witnessed a decline between 1996 and 2010. Regrettably, incidence rates have risen since then, as evidenced by the data in Fig. 1.

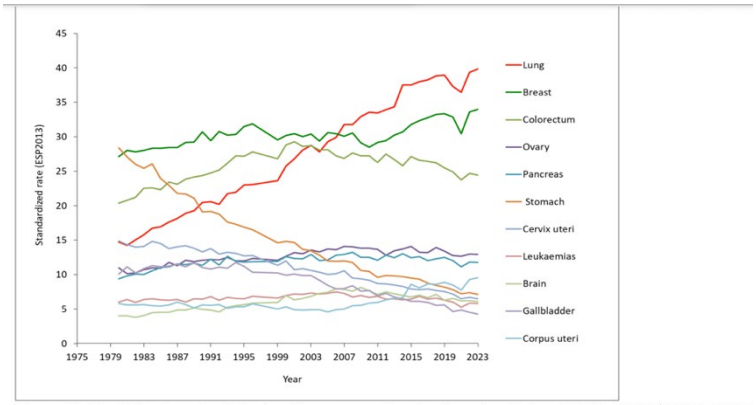

Figure 5. Mortality trends of the leading cancer sites for females, Poland 1980–2023 (2022–2023 estimation)

Figure 1 shows standardised incidence rate of different type of malignancies in Poland between 1975 and 2023. The breast cancer incidence has been shown in dark green displaying a steady increase since 1975, however, with a slight drop between 2004 and 2010. However, since then the number of cases has risen and is predicted to do so in the foreseeable future.[2]

Conversely, in the UK, the average annual incidence of breast cancer stood at 56,000 cases (incidence rate: 165.2/100,000), resulting in 11,500 deaths. This positioned breast malignancy as the most prevalent neoplasm among women aged over 25, whereas younger females (15-24) were more prone to carcinomas and melanomas. As depicted in Figure 2, a slight decline in the incidence rate was observed between 1998 and 2004, followed by a steady increase until 2015, when a 0.85% decrease was noticed [iii] In Both countries the most common subtype is NOS (no other specified) 70-80% in Poland [iv] and 75% in the UK [v], followed by lobular carcinoma.

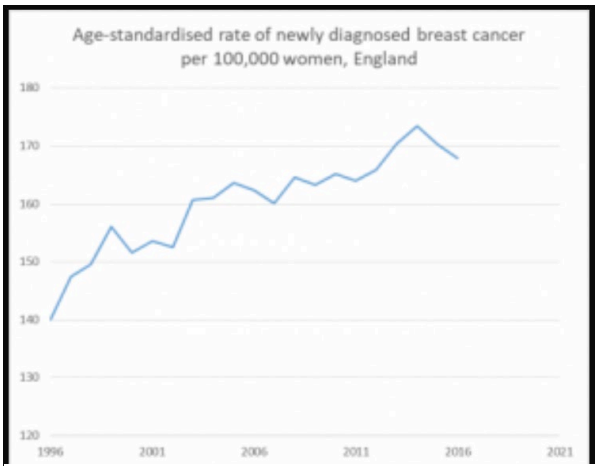

Figure 2 shows age-standardised rate of newly diagnosed breast cancers per 100,000 women in England. As displayed since the introduction of screening programmes in 1988 there has been a steady increase of new diagnoses with a little drop in the early 2000s.[4]

One notable aspect of histopathology services is their organization predominantly around tertiary care centers, a pattern mirrored in the UK where such services are also available in District General Hospitals (DGHs). Additionally, referral pathways exhibit distinct operational methodologies. While I am accustomed to the British "routine" or "2WW" referral system for special tests, my experience in this oncology center introduced me to the concept of "supercito," designated for the most suspicious and time-pressured cases, with results expected the following day. In terms of biopsies, I observed instances where patients opted for private procedures and incurred out-of-pocket expenses, despite being eligible for free healthcare under the Polish National Health System (Narodowy Fundusz Zdrowia). I was surprised by this practice, as public hospitals in the UK typically do not offer privately conducted procedures during their standard operating hours. Additionally, I was astonished to discover that Polish histopathology trainees are taught biopsy techniques early in their training, contrasting with my previous understanding that such procedures were reserved for radiologists rather than pathologists. Despite these differences, histopathology services in Poland are structured quite similarly to the NHS model, requiring specialist

referrals for biopsies. Polish pathologists are responsible for evaluating intraoperative or post-operative samples for potential malignancies and participate in weekly Multidisciplinary Team Meetings (MDTs) for case discussions with other healthcare professionals.

The healthcare system in Poland exhibits nuanced differences from the NHS regarding available screening programs. Notably, Poland offers cervical screening, colonoscopy, and mammography, while the UK additionally provides abdominal aorta aneurysm screening for men over 65. These programs diverge not only in the screenings offered but also in their implementation approaches. Poland's recent extension of the breast screening program to women aged 45-75, with biennial mammograms, contrasts with the UK's provision to those aged 50-70 every three years. Despite these advancements, Poland contends with suboptimal participation rates, ranging from 30 to 40%, falling short of the recommended 70% threshold. Consequently, early cancer detection rates remain low, posing potential prognostic challenges [vi]. Conversely, the UK boasts a notably higher attendance rate of approximately 67%, leading to early diagnosis in 86% of cases, thus mitigating lymph node invasion risk[vii]. Consequently, 5-year survival rates are superior in the UK (88%) compared to Poland (74%). Cost analyses reveal differences in the financial implications of cancer detection, with Poland averaging $5500USD [viii] while in the UK approx. 9375 USD (1GBP = 1.25 USD) [ix]. Hence, estimated cost effectiveness in Poland would be approx. 2500 USD [x] while in the UK 14500 USD[xi]. The introduction of the HPV DNA test for screening in the NHS, replacing cytology methods still favoured in Poland, introduces potential cost reduction and increased patient comfort. In conclusion, while the UK's screening programs exhibit stricter eligibility criteria and test frequencies for breast and cervical cancers. However, higher participation rates translate to fewer patients progressing to incurable stages, yielding superior survival outcomes.

This placement has been pivotal in my personal and professional development, providing me with the opportunity to bridge theoretical knowledge with practical clinical experience while gaining a profound understanding of the indispensable role of pathologists in healthcare. Initially, my exposure to breast pathology, especially concerning histological malignancies, was limited, resulting in a less fruitful Year 3 breast clinic placement than I had hoped for. However, over the course of three weeks, I successfully closed this knowledge gap, delving deep into the intricacies of analysing pathology samples. Understanding the journey of samples sent to pathology for testing has been enlightening, empowering me to articulate treatment pathways to future patients and appreciate the collaborative efforts of multidisciplinary teams in reaching diagnostic conclusions. This newfound understanding has equipped me with the tools to offer clearer explanations and guidance to patients, ensuring they have a better grasp of their treatment journey and the decisions made by their healthcare team.

Shadowing an ST1 doctor throughout the placement offered invaluable insights into the day-to-day responsibilities and expectations associated with a career in pathology. Initially apprehensive about analyzing complex specimens, particularly those associated with severe diseases, I found reassurance in witnessing the robust support network available to pathologists, including guidance from senior colleagues and readily accessible reference materials. The rapid assessments of intraoperative specimens highlighted the critical role pathologists play in providing timely feedback to surgeons, shaping immediate surgical decisions. Moreover, the regular patient interaction, demonstrated through weekly biopsies, shattered any preconceived notions about pathologists' detachment from direct patient care.

Overall, this placement has not only enhanced my confidence in understanding breast cancer but has also broadened my knowledge to encompass other vital organs such as the uterus, cervix, thyroid, and gastrointestinal system. With this experience in mind, I am confident that I will be able to make a fully conscious decision about my future career path and guide my future patients with clarity and empathy, ensuring they feel informed and supported throughout their healthcare journey.