

ELECTIVE (SSC5a) REPORT (1200 words)

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

Objectives 1, 2, 3: Global/Public Health

Key points:

- More well-established and well-imposed national public health screening programs means that a larger proportion of cancers are detected earlier than they would have been otherwise, thus improving patient outcomes (e.g., colon cancer, cervical cancer).
- Primary prophylaxis through national vaccination programmes helps prevent the development of many cancers which are more common in underdeveloped nations (e.g., cervical cancer).
- Advancements in treatment regimens means that patients often have different treatment options ranging from oral medications, which can be taken at the convenience of their own home, to IV infusions and injections which may require outpatient appointments.
- The wide accessibility of different treatment regimens means there is possibility to switch to a different treatment regimen after resistance or intolerance to treatment is experienced. Options to change to other medication regimens may not exist in developing and underdeveloped nations.
- The availability of new targeted therapies and immunotherapies has extended the life of patients tremendously in the last few decades. Late-stage cancer patients may live several years following the completion of treatment with a single immunotherapy drug agent. Immunotherapy produces fewer side effects and is overall better tolerated compared to traditional chemotherapy, radiotherapy, and other targeted therapies. A small proportion of cancer patients (<5%) even exhibit so called complete response, and potentially even disease cure with immune treatments as they do not exhibit disease relapse within their lifetime.
- Genetic sequencing means that physicians are able to choose the most appropriate agent for specific patients to employ personalised precision medicine by targeting their specific mutations in the in an intelligent evidence-based manner. However, the clinical significance of all mutations has not yet been established raising questions on how the utility of much of the information provided through. Moreover, several NGS platforms as well as genetic assays have been shown to lack reproducibility and therefore their actual clinical utility has come into question.
- The availability of national guidelines (NCCN, ASH, etc) to guide the clinical management of conditions according to advice from expert board panels on national societies has largely illuminated clear pathways for clinicians to follow in oncology so that all decisions in oncology may one day be guided by hard evidence from RCT head-to-head comparative studies. This may not be the case in developing and underdeveloped nations, due to lack of accessibility to this information, language barriers, scientific illiteracy, lack of funding or lack of resources to provide the latest gold-standard therapies. Nevertheless, regardless of national guidelines, clinical judgement must always come into play and each patients' individual characteristics must be considered on a case-to-case basis for optimal treatment selection.
- Despite NCCN guidelines, several grey areas of evidence exist (e.g., in duration of treatment required such as 3-months vs 6-months for FOLFOX; and lack of head-to-head comparisons of specific regimens).
- The impact of pharmaceutical companies in affecting national guidelines cannot be neglected as the experts who compose national guidelines often have conflicts of interest or may be unconsciously swayed by the pharmaceutical industry.
- Financial hinderance in access to treatments can be an issue in both developing/underdeveloped as well as 1st world countries such as the US that have a largely private healthcare sector. This may mean that even though medicines are available, the financial unaffordability and/or fear of dept may prevent patients from accessing the gold-standard of therapy and instead opting for other cheaper treatments. Surprisingly, sometimes the poorest (including illegal immigrants) in wealthy nations such as the US may have better access to medicines (through MEDICAID) compared to middle-class working individuals who may have MEDICARE, a private insurance that does not cover enough costs, or none of the above – even if the latter may have been contributing to government NSS schemes for their entire working lives. Sadly, this is not infrequent, and it does affect patient outcomes.

Objective 4: Personal/Professional development objective

My time working with Dr. Yoe was tremendously valuable in helping me gain a more thorough understanding of the attributes and skills expected of a recent medical graduate who will be commencing their PGY-1 year of training in the States. Specifically, working alongside other foreign medical graduates, especially some of whom were only a couple months shy from commencing their intern year of training in internal medicine training in the US, I was able to absorb insightful information of what programs are looking for in candidates and how important it is to make a good impression in the first 3 months of the intern year. Being able to perform basic procedures (such as venepuncture, IV-line insertion, IM/SC injections, and medicines reconciliation) seamlessly, with confidence and efficiency can make one come across as a good asset to the team and gain the trust of senior faculty members. I had opportunities to practice these skills and understand the knowledge underlying the basic principles and techniques used in these procedures in greater depth than I had done previously. Of course, I am grateful that during my attachment more focus was put on me learning about the medical conditions and assimilating as much as possible from Dr. Yoe's pool of knowledge.

Secondly, having a good set of in-depth knowledge of medical conditions, as well as their associated pathologies, presentations and work up tests, can help one stand out in residency. Acquiring such knowledge base, however, is a marathon and requires repeated exposure and reading to reinforce learning. Importantly, in any field of medicine, but even more so for a specialist topic such as hematology, it is paramount for one to start developing their own work-up algorithms and 'pocketbook' summaries of conditions that form the 'bread and butter' of the specialty (e.g., the big 6 in hematology: thrombocytopenia, thrombocytosis, leukopenia, leukocytosis, anemia, and polycythemia). I feel like I leave this clinical attachment with a good sense of how to perform the basic aspects of a specialist work up for such conditions. Nevertheless, my own work-up algorithms will require continuous trial and adjustment after errors, to catch the conditions that escape me. Admittedly, although not knowing everything in hematology, I feel much more confident in this field and in being able to use my critical thinking and to employ in real life the skills I learned in this attachment. I feel like whatever I did learn, I understood, and this understanding means that I am more likely to remember it.

One of the aspects of this placement that stood out to me was all the non-clinical life lessons I learned from Dr. Yoe. Some of these teachings, although related to medicine, were not hard-core medical facts. Firstly, bedside manner can take many forms and building rapport may look different from patient to patient. Some may require you to give them more space, while others may need continuous emphasis and a 'strict' doctor to help them stay on track. A good sense of humour, personal anecdotes, and metaphors to explain medical jargon can be surprisingly effective even in certain difficult situations. Efficiency and time management are quintessential when working in an overcompetitive free market environment such as private practice in the U.S. Developing a niche area of expertise and skillset can help one ensure that they will be successful in their job market. First impressions can make a huge difference in one's career and it is important to be prepared and ready to jump when these life-changing opportunities may arise. Working in a team effectively can be difficult but rewarding and may require continuous effort, self-responsibility, flexibility, and engagement. Even if there is no clear path or solution that is optimum, it is important to always try to better oneself and their position in life. Hard work is necessary; a young doctor must read as much as they can if they want to even come close to matching with the seniors in their field. Having an opinion on issues and staying up to date on social, political, and financial topics is necessary to know where one stands. The sacrifices needed for a career in medicine are not worth it for the financial compensation (obviously); it is a service to the people, and this service is the primary reason one should choose to do it.