MEDICAL ONCOLOGY

Elective Report 2011 – Yiwen Loh

Cancer Epidemiology

Cancer is among the top two leading diseases causing premature death. The epidemiology of cancers in North America is broadly similar to Western Europe, both consisting of developed countries and mainly populated by Caucasians. In addition, with rising expectations and emphasis on quality of life, reconstructive surgery is assuming greater importance in team management. With a keen interest in seeing how these two fields have developed in America, I was privileged to have successfully organised an elective with the Otolaryngology department in Stanford Hospital.

California has 12% of the US population. In 2011, about 54,690 people are predicted to die of the disease – about 150 people each day. One in every four deaths in California is from cancer. Cancer is the second leading cause of death, accounting for 24% of all deaths in 2007. Smoking, poor diet, and obesity are key risk factors for cancer as well as other diseases, such as heart disease, cerebrovascular disease, chronic lung disease, and diabetes.

The US Census Bureau estimates California's population to be more than 36.9 million. Of these, 15.6 million are non-Hispanic whites; 2.8 million are African Americans; 13.2 million are Hispanics; 5 million are Asians; 285,000 are American Indians and Alaskan Natives; and 132,000 are Native Hawaiians and Other Pacific Islanders.

Prostate cancer is a common cancer for males in most ethnic groups, but lung cancer is the most common among Laotian, and Vietnamese males. Breast cancer is the leading cancer among women of all racial/ethnic groups.

The risk of developing cancer varies considerably by race/ethnicity. African American males have the highest overall cancer rate, followed by non-Hispanic white males. Among females, non-Hispanic white women are the most likely to be diagnosed with cancer, but African American women are more likely to die of the disease. Cancer rates are considerably lower among persons of Asian/Pacific Islander origin and persons of Hispanic ethnicity than among other Californians. However, both groups have substantially higher rates of certain cancers, such as liver and stomach cancer. Asian/Pacific Islander and Hispanic women are also more likely to develop and die from cervical cancer. Research indicates that cancer rates in populations immigrating to the US tend to increase over time.

The reasons for racial/ethnic differences in cancer risk are not well understood. It is likely that they result from a complex combination of dietary, lifestyle, environmental, occupational, and genetic factors. Higher mortality rates among some populations are due in part to poverty, which may increase the risk of developing certain cancers and limit access to and utilization of preventive measures and screening. Poor health among persons in poverty may also limit treatment options and decrease cancer survival.

Stanford Hospital

Stanford Hospital & Clinics and Lucile Packard Children's Hospital are consistently ranked among the best in the US and internationally recognized for advanced care of both adult and paediatric

patients. Being linked to Stanford University School of Medicine, both hospitals benefit from cutting-edge medical discoveries and innovations emanating from expert researchers in the various fields.

The Otolaryngology department itself is divided into Head & Neck Oncology, Rhinology, Otology & Neurotology, Facial Plastic & Reconstructive Surgery, Laryngology, Cranial Base Center, Sleep Surgery, Cochlear Implant Center and Audiology. During my stay, I spent most of the time in the Head & Neck Oncology and Facial Plastic & Reconstructive Surgery specialties.

Head & Neck Oncology functions via a strong multidisciplinary approach, combining the expertise of head and neck surgeons, Drs. Willard Fee and Michael Kaplan, other specialty surgeons, medical and radiation oncologists, pathologists and speech therapists. This is also enhanced by being an area of active clinical trials for patients to participate in.

A major feature of the department is the weekly head and neck cancer tumour board meeting. This involves patients meeting up with a multidisciplinary team of experts who will provide second opinions and care planning. Most of the surgical workload involves neck dissections, laryngectomies, major craniofacial resections, thyroidectomies, and oropharyngeal resections. This is also very similar to that in UK. However as I have not done any rotations in that specialty during medical school, I am unable to comment on specific differences.

Dr Sam Most leads the Facial Plastic and Reconstructive Surgery at Stanford. This department offers a full spectrum of facial cosmetic procedures to enhance appearance of the face and neck. Some examples include facelift, eyelid rejuvenation, browlift, rhinoplasty, and chin augmentation, among others. The surgeons also specialise in restoring facial contour after injury, as well as reconstruction necessitated by removal of tumours in the head and neck region.

I had good opportunity to observe a huge array of surgeries from the other Otolaryngologists, most of whom are leading experts in their subspecialties, Drs. Robert Jackler, Edward Damrose, Robson Capasso, to name a few.

Healthcare Financing

US has a very different healthcare system from UK. NHS in the UK provides a centralized, single payer healthcare system where everyone has equal access to healthcare, regardless of rich or poor. The American system is predominantly funded by health insurance paid by the individuals each month, with a percentage contributed by the employers. For those unemployed persons, there is government sponsored insurance called Medicaid and for those 65 and over there is the government insurance called Medicare. While all hospitals will accept emergency patients regardless of whether they have health insurance, elective patients will be determined by the individual doctor and hospital. Stanford Hospital is one such private hospital that only accepts elective patients with health insurance or pays cash.

The health insurance is usually determined by the individual's employers. There are also different types of health insurance – whether you are permitted to choose your specialist doctor or not, whether you can only see doctors under the Kaiser centres, different health insurance provide different subsidies for each procedure. Kaiser centres are one-stop treatment clinics and hospitals with a specialist from each field, and these centres are scattered across US.

Resident physicians (similar to Registrars) also play a role in assisting fully qualified doctors in their clinical duties. Additionally, there are Physician Assistants and Nurse Practitioners who are people with medically related backgrounds (e.g. paramedics, nurses) who undergo shortened medical school training (around 2 years) who are capable of seeing patients and making diagnoses under supervision of licensed physicians. They also help to provide basic drug prescriptions in pharmacies, with cheaper outpatient fees.

In comparison to the NHS, the American healthcare system has its advantages – shorter waiting lists, better funded hospitals with modern facilities, individuals have more liberty to choose their doctors. However, there are also many young people or poor people who choose not to purchase health insurance as they see it as a burden to their monthly expenditure. There may also be delays to seeing a doctor as it may take months before the insurance company agrees to subsidise the individual for a particular procedure. International pharmaceutical companies also command higher drug prices in the US as they are paid for by the individual, as compared to the tight budgets in UK hospitals. This increases the overall healthcare costs in the US.

In the past, health insurance companies can also refuse to accept individuals with certain medical conditions. However, the new Bill that has been recently passed should rectify this problem and many others.

In a Nutshell

Overall, I have enjoyed my stint at Stanford Hospital. It is a large modern hospital with excellent patient care. It was also a privilege to work with so many renowned surgeons. I am deeply fascinated by Head and Neck Oncology and cosmetic rejuvenation, and this attachment has further consolidated that.