

## **Presidential address: Annual Academic Sessions of College of Pathologists of Sri Lanka 2015**

### **Using pathology reports as a data source for strengthening cancer surveillance**

DOI: <http://doi.org/10.4038/jdp.v11i1.7688>

Chief guest Professor Mohan de Silva and Dr Mrs Dhammika de Silva, guest of honour Professor and Mrs Neil A Shepherd, special resource persons from the UK, Professors Adrienne M Flanagan and Marco Novelli and Dr Roberto Tirabosco, past presidents and members of the Council of the College of Pathologists of Sri Lanka, presidents and secretaries of other colleges and associations, special invitees, ladies and gentlemen.

I would like to start off by saying that I am very cognisant of the responsibility that you have placed upon me. It is one I do not take lightly and I will strive to continue the good work that has gone on before me.

As the College celebrates its fortieth year, I would like, if I may, to take a moment to look back, as I understand, this is indeed necessary if we are to step into the future meaningfully.

“The longer you look back, the farther you can look forward.”

*Winston S. Churchill, 1944, Address to the Royal College of Physicians.*

The College of Pathologists of Sri Lanka was formed in 1975, by a small group of pathologists with a big vision, who understood the importance of having an organized body to represent them. With the establishment of the Board of Study in Pathology of the Post Graduate Institute of Medicine (PGIM) in 1980, a training course providing a much-needed diagnostic service in pathology to the entire country commenced. Once this training was established, there were

other aspects of pathology to identify and improve and the College we have today, forty years later, is a reflection of the aspirations and hard work of many presidents, councils and college members. Over the years, the Board of Study in Pathology of the PGIM continues to refine the pathology curriculum and its assessments and strives to maintain and nurture core values of pathology in the wake of changing trends in medical education worldwide.

The College has had many functions over the years. Projects in the health sector have enabled the development of key peripheral laboratories, funded training programmes for Medical Laboratory Technicians (MLT's) and funded the revision of national guidelines for reporting of biopsies. Other key goals include expansion of the National Cervical Cancer Screening Programme started two decades ago, the developing of key national immunohistochemistry laboratories islandwide and the planning of a reference centre for molecular biology.

The pathology report documents our findings when we view cancer through a microscopic lens. As pathologists, we identify and type cancer and comment on its spread and prognosis. The report is used as the basic tool for diagnosis, treatment and prognostication. This report however, can be used for another purpose. If cancer data from pathology reports islandwide are collated and analysed collectively, it can be used as a highly effective tool in improving the accuracy

of cancer surveillance. Cancer surveillance provides a quantitative portrait of cancer in a defined population. It helps us analyse information on new cancer cases, reveals the strengths and weaknesses of our healthcare system, including how well our screening programmes are working and helps to prioritise resource allocation. Today, I would like to take you through the process of cancer surveillance and discuss how using the pathology report as a data source, is helping to improve cancer surveillance data in this country.

Cancer in this country is an ever-growing problem. The National Cancer Control Programme (NCCP), established by the Ministry of Health in 1980 with the support of the World Health Organization (WHO), has been the governing body responsible for the coordination of cancer surveillance in Sri Lanka over the last 35 years. It also publishes the 'Cancer Incidence Data', a registry that provides an analysis of all newly registered cancer patients. In the initial years from 1985 to 2000, data for the registry was based on records obtained from two specific sources. The first was the cancer related mortality data from the Registrar General's Department and the second from treatment centres where radiotherapy facilities were available at the time, the Cancer Institute Maharagama and the Cancer Units in the Teaching Hospitals Kandy and Galle. For the next fifteen years, cancer incidence data continued to be obtained from these two sources.

In the year 2000 however, a change occurred. For a period of one year, a team of researchers decided to test the possibility of using a third source of cancer data, from 'pathology reports' at the point of cancer diagnosis. This WHO funded study, conducted in 2000/2001 was based in the Department of

Pathology, Faculty of Medicine, University of Colombo and the team comprised Prof. Priyanthi Kumarasinghe, Prof. Lalani Rajapakse, Dr Yasantha Ariyaratne, the then Director NCCP and myself. One of the aims of the study was to obtain the islandwide cancer data from pathology reports from as many hospital laboratories as was possible over a one year period. Trained pre-intern medical officers were deployed to pathology labs islandwide, where they extracted cancer data from pathology reports. The data collection sheet contained information related to the patient and the tumour, which was then sent to the Cancer Control Unit (CCU). The CCU coded and classified the data using the ICD-O classification of the WHO, which is the standard tool for coding diagnoses of neoplasms in cancer registers and pathology laboratories worldwide. Duplicates and multiple entries were removed from the data base and the data compiled. Therefore, cancer incidence data for the year 2000 included data from pathology reports as a third data source, in addition to that from treatment centres and mortality reports. Although it was hoped that pathology returns could continue to be a data source, this did not happen for the next eight years.

Looking back, this was probably due to more pressing challenges in the laboratory services posed by a significant lack of both infrastructural facilities and laboratory personnel at the time. The main challenge was the very small number of pathologists available to take over the time-consuming and challenging task of building up functioning laboratories. In the year 2000, there were only thirty-five pathologists in Sri Lanka. Of this, only a relatively small number were available for work in peripheral laboratories as some worked in the university

setting and others had left or would leave the country, within the next few years. A pathologist newly appointed to a peripheral laboratory also faced the responsibility of reporting haematology, chemical pathology and occasionally microbiology samples, in addition to routine histopathology. They were also required to obtain and maintain laboratory equipment for histopathology, haematology and chemical pathology and ensure a regular supply of chemicals throughout the year. The severe dearth of trained MLTs, a vital part of any successful laboratory proved to be another formidable challenge, as their training programme provided too small a number to adequately meet the increasing requirement islandwide. Over the next ten years or so, each of these challenges were gradually addressed.

The PGIM continued to train and equip pathologists resulting in a steady rise in the number of pathologists within the country. Similarly, sub-specialisation brought in more haematologists and chemical pathologists to peripheral laboratories, enabling each consultant to manage and organise their own speciality the way they deemed suitable. Over time, facilities in peripheral laboratories improved. Newly appointed pathologists were able to offer better diagnostic reporting services to their own hospitals and hence concentrate on developing immunohistochemistry and other facilities.

Additional MLT training facilities were started at the National Institute of Health Sciences in Kalutara, at the Teaching Hospital Peradeniya and in the Universities of Sri Jayawardenepura, Peradeniya and Karapitiya. Nevertheless, the inadequacy of MLTs continues to be a significant challenge for the Ministry of Health and regularizing their training remains one of the most important

factors in ensuring uninterrupted laboratory function.

Many other changes during this period resulted in a faster expansion of the laboratory services. We went from war to peace. Improved transport and roads ensured faster access to labs and less delay. Expanding IT facilities improved communication ensuring that hospital laboratories could be accessed immediately. Facilities for storing and transferring data gradually became available with current plans to promote a web-based data exchange, especially for cancer surveillance. With this, there were renewed calls from the College of Pathologists to strengthen cancer surveillance using cancer reports, resulting in the re-emergence of pathology reports as a data source for cancer surveillance in 2008, eight years later.

The cancer registry of 2008 recorded returns from 14 laboratories in addition to those from the treatment centres. With the publication of the 2008 registry, some very notable facts emerged. The Executive Summary of the Cancer Registry recorded two particularly significant differences in the data of 2007 and 2008, with and without data from pathology returns respectively.

"The percentage increase of the number of cancer cases diagnosed from 2007 to 2008 is 20%". (when age standardised rates of cancer incidence were compared). The main contributor for this increase could be the addition of new data sources from pathology laboratories".

"If the cases which were reported only from pathology laboratories was not considered, the percentage increase in the number of cases (from 2007 - 2008) would be 4.9%".

A 20% increase in the number of cancer cases (even with returns from only 14 laboratories) show that pathology returns are a vital and significant data source for cancer surveillance. These findings also emphasise the importance of each laboratory responsibly maintaining regular cancer returns. The number of laboratories sending returns has gradually increased from 16 laboratories in 2008 to 40 laboratories in 2014. Going hand-in-hand with this however, another factor emerges: laboratories islandwide, do not have comparable workloads.

At the beginning of the year, the College decided to look at the routine biopsy workload of histopathology laboratories across the island for 2014. The number of biopsy specimens (workload) reported by a single pathologist annually was categorised as low (<1500), low and high normal (1501-4500), high (4501-6000) and very high (>6001). The number of biopsies reported between laboratories varied markedly, from 999-9455, with almost a ten-fold difference, in some cases. It was also interesting, that about 45% of the routine annual workload was borne by 11 laboratories in the 'high' and 'very high' workload categories, while at the other end of the spectrum, 8 laboratories had a low sample load. The Health Ministry needs to consider this type of data, when prioritising the allocation of resources. Routine workload data obtained by the College of Pathologists were compared with cancer returns sent from hospital laboratories to the NCCP. Unsurprisingly, laboratories having a higher biopsy workload tended to report a relatively higher number of cancers and vice versa. Therefore, when the NCCP computes data, it is not only that more laboratories should be

encouraged to send returns, but we should also ensure that cancer returns from all of the high workload laboratories are included so that the surveillance data is accurate. The College needs to work with the NCCP and provide them with the list of laboratories likely to have significantly high workloads.

I would also like to mention that the private health care sector should not be forgotten as a further data source for cancer. The number of cancer patients being diagnosed and treated here is totally unknown as cancer returns are currently not available from this sector.

As I come to a close, I wish to say that, if we are to maintain a responsible surveillance programme, communication between stakeholders is the key. This involves cooperation between members of the Ministry of Health, the NCCP, the College of Pathologists and the Private sector institutions to initiate and maintain regular cancer returns.

I wish to thank Dr Eshani Fernando, Director of the NCCP, Dr Suraj Perera, Community Physician, NCCP and the staff of the NCCP. A special thank you to Dr Sandini Guneratne who took on the task of gathering data for the College. A very special thank you to my mother, the first Pathologist I ever knew, and to Vasantha, Nishan and Marisha for their encouragement and support.

Thank you very much!

**Dr Niranthi Perera**

*President, College of Pathologists of Sri Lanka*

*9<sup>th</sup> September 2015*

*Hotel Ramada, Colombo, Sri Lanka*