

FOURTH ANNUAL REPORT OF THE VICTORIAN CYTOLOGY (GYNAECOLOGICAL) SERVICE
FOR THE YEAR ENDING 30TH JUNE, 1969

'Looking forward with confidence' was the concluding remark in the Third Annual Report of the Victorian Cytology (Gynaecological) Service and it is pleasing to be able to report that the year under review has been one of growth of activity and consolidation of resources.

FINANCIAL AND STATISTICAL

The year to 30th June, 1969 was completed with an excess of income over expenditure of \$8,742. This result is to be compared with the previous year's surplus of \$4,671.

To facilitate (a) a comparison between this and the previous years maintenance expenditure, and (b) calculate the cost per smear it is necessary to deduct from total expenditure, items of a capital nature which, this year, amounted to \$23,904 compared with \$5,041 of the previous year. Thus maintenance cost for this year is \$108,355 a 6.5% increase on last years \$101,689.

The Salary and Wages bill increased by \$4,663 which included the cost of three additional staff to operate key punch machines, referred to later in this report.

The Administration expense increase was foreshadowed in the last report and actually increased \$5,721 to \$30,787. In this category, postages and overhead charges increased by \$3,400 whilst service and stationery costs associated with data processing required \$1,714 being the first year this type of expense has been experienced.

The Capital expenditure incurred during the year embraced such purchases as a card punch and verifier for data processing, furnishings and equipment to facilitate occupation of the new Joint Services Block - referred to later in the report, whilst eight additional microscopes were purchased to meet the expansion of staff activities and teaching requirements.

The number of smears examined during the year totalled 107,794, a 10% increase on the previous year. By dividing the number of smears into the year's maintenance cost of \$108,355 gives a cost per smear of \$1.005¢ compared to the previous year's cost of 104¢ per smear.

From inception of the service to the 30th June, 1969, 372,025 smears have been examined for a net maintenance cost of \$370,692 or 99.6¢ per smear.

ACCOMMODATION

Undoubtedly the major event of the financial year just concluded was the occupation by the Victorian Cytology (Gynaecological) Service of its new quarters.

These comprise one whole floor of the new hospital and clinical school building at Prince Henry's Hospital, and provide over 5000 square feet of floor space. A feature of the new laboratories are two large screening areas, wired for closed circuit television, which accommodate a total of thirty-two screeners. The clerical area has accommodation for routine typing, mailing, filing, and punch card operations. In addition, there is a preparation laboratory, a seminar room for teaching activities and staff conferences, a small research laboratory, and office laboratories for senior staff.

There is no doubt that in terms of planned space and equipment the Victorian Cytology (Gynaecological) Service as one of the most advanced cytology laboratories in the world.

In concluding this section, appreciation must again be expressed to the Board of Management of Prince Henry's Hospital and the Director of Pathology Services of that hospital whose tolerance and co-operation made it possible to accommodate the service, for its first four years, in an already crowded Pathology Department.

STAFFING

The earlier reports of the Service referred to the problems of staffing a cytology laboratory capable of carrying out a large scale cancer detection programme. These problems were due to a number of factors, perhaps the most important being the nature of the work. Thus intelligent, responsible, and highly motivated technicians are required to perform a task that is repetitious and frequently tedious. In addition, the relative newness of cytology and the lack of a formal qualification in Victoria, has resulted in few trained and qualified technicians being available.

However, despite the problems involved, it would appear that very considerable stability of technical staff has been achieved. This has been due mainly to the development of two categories of technician namely, the unqualified screener, and the qualified cytotechnician or cytotechnologist.

The "screener" is concerned with the initial evaluation of the specimen. She possesses no formal qualifications but, as the result of concentrated and specialized training and considerable experience, she becomes extremely skilled and reliable. At present a number of full-time screeners are still employed, these performing a very valuable function in the work of the unit. However, because of the many advantages of part-time screeners, the trend will be to reduce gradually the number of full-time unqualified staff.

This reduction will be allowed to occur by a process of natural wastage.

The use of part-time screeners has been an outstanding success. This group has been recruited from married women who have had previous experience in medical laboratory work or work in an allied field. These women are mostly of middle age who no longer have full-time family commitments. They have shown great enthusiasm and willingness to learn and all have developed into very competent and responsible screeners. They also form an extremely stable group. Since part-time screeners were first used in July, 1967, a total of twenty (20) have been employed and there have been only three (3) resignations.

While relying heavily on "unqualified" screeners it is vital to develop and maintain a smaller group of highly trained, qualified "career" technicians. These are involved in teaching activities, and the supervision and, most importantly, checking, of the screener's work.

Two categories of qualified technicians are now recognized, namely cytotechnologists and cytotechnicians. The former is defined as a Science graduate or holder of the Diploma of Medical Laboratory Technology (a 5 year part-time course conducted by the Royal Melbourne Institute of Technology), with training in cytology, whilst a cytotechnician is a holder of the Certificate of Medical Laboratory Technology (a 3 year part-time course), again with training in cytology.

In the past it has been necessary to provide the cytology training as an addition to the R.M.I.T. qualification. However, recently the technique subject Cytology 1 has been introduced into the R.M.I.T. courses, thus making it possible for technicians to receive training in cytology during their course. It is hoped that eventually a second technique subject, Cytology 11, may be

established, thus providing for the formal teaching of cytology at a high level.

It is envisaged that three grades of cytotechnician will be employed by the Service, namely, trainee, qualified, and senior. The latter will be qualified cytotechnicians who hold positions of diagnostic and administrative responsibility within the Service.

In any consideration of staff for a large scale cytology programme, progress in the development of automated screening devices is intensely relevant. Recently there have been major advances in this field and it seems probable that electronic screening equipment will be available in the fairly near future.

It must be stressed that it is not envisaged that electronic devices will ever replace the trained cytotechnologist. However, it seems inevitable that such devices will be of tremendous assistance by screening out the majority of negative specimens leaving a small percentage of selected specimens for human examination. Such preliminary screening would be of immense value in enlarging the scope of existing cervical cancer screening programmes and also in implementing programmes for the detection of cancer of the lung and other sites.

It is obvious that automated screening will have a very considerable impact on the Victorian Cytology (Gynaecological) Service and that the advances referred to above should be investigated and evaluated vigorously.

On the 30th June, 1969, the staff of the Victorian Cytology (Gynaecological) Service consisted of the following members:

A. Technical.

- Full time: One (1) Laboratory manager.
- Two (2) Cytotechnologists.
- Two (2) Cytotechnicians.
- Six (6) Screeners.

Total = 11

- Part time: Seventeen (17) Screeners.
- Two (2) Preparation Technicians.

B. Clerical.

- Full time: One (1) Secretary

One (1) Senior Typist.

Four (4) Typists.

One (1) Senior file clerk.

Two (2) File clerks.

Three (3) Key-punch operators.

Total = 12

Part time: One (1) File clerk.

TEACHING ACTIVITIES.

For some years now the cytology department of Prince Henry's Hospital has provided teaching facilities for technicians and medical graduates from hospitals throughout Victoria and for similar people from other states and overseas countries. More recently the Victorian Cytology (Gynaecological) Service has participated in these teaching activities. This participation by the service has been essential in order to provide training for its own technicians but has also proved to be of considerable value to those technicians already trained. The association of an active teaching programme with the Service acts as a stimulus to all technicians and is invaluable for maintaining enthusiasm, motivation and technical competence. The R.M.I.T. subject Cytology 1 is conducted under the auspices of the Victorian Cytology (Gynaecological) Service and Hospital cytology laboratories and the initiative for the expansion of this course and the development of a subject Cytology 11 must of necessity come from these bodies. It need hardly be emphasized

that any such advances in cytology training in Victoria must benefit the Victorian Cytology (Gynaecological) Service as it is the largest diagnostic cytology laboratory in the State.

The quality of teaching in the combined Service and Hospital laboratories has attracted attention from other states and overseas. Medical graduates from Malaysia and Indonesia have studied in the cytology laboratories and towards the end of 1969 two Science graduates will be sent from Hong Kong to receive training in preparation for the establishment of a uterine cancer detection programme in that city.

RECORD & FILING PROBLEMS

The last report referred to the considerable concern caused by the rapidly growing records and files of the service. It was stressed that it is imperative for the data of the cytology service to be stored in a form that can be readily retrieved and analysed. Such analysis is essential for the control of accuracy of the diagnostic activities of the service and also from utilizing the vast amount of information made available by a major cancer detection programme.

It is encouraging to note that considerable progress has been made in solving the problems relating to the records and files of the service. This progress has been due largely to the efforts of Mr. John O'Donohue, Research Officer of the Department of Health. Mr. O'Donohue has worked closely with the medical staff and laboratory manager of the service. Key punch machines have been installed within the laboratory area and the information relating to the current diagnostic work is now being transferred to punch cards.

At present the data input is restricted to the patient's identification clinical features, and cytological findings. However, work is proceeding on the programmes necessary to record follow-up information thus making possible correlation between the cytological and histological findings in those cases who have had abnormalities demonstrated in their cervical smears. Such correlation is essential for the control of accuracy of the diagnostic work.

It is anticipated that the next report of the Service will record the solution of most of those problems relating to the current records and files. However, eventually further consideration will have to be given to the large back-log of records that exists.

RESEARCH ACTIVITIES

The association of an active, even though limited, research or investigational programme with any routine diagnostic department is always of considerable value to that department. For this reason it is gratifying to note that one of the original stated aims of the Service was "to provide in Victoria facilities for research and investigation with respect to the cytological examination of gynaecological specimens associated with cancer detection and to undertake such research and investigation".

Over the past three years attempts have been made to establish a project involving the study of the chromosomal content of cells in cancer and pre-cancerous lesions of the uterine cervix. Some progress has been made but the work has been restricted by the lack of suitable laboratory space and by the need to give priority to the routine diagnostic work. The occupation of the new building, the possession of a stable, trained and competent technical staff, and the control of the various diagnostic procedures, has made it possible to review the investigational programme.

On the basis of initial experience it is apparent that no significant progress can be made with the existing lack of senior or graduate staff. Thus the graduate staff of the service currently consists of two quarter-time Specialist-Pathologists and two Science graduates of B.Sc. status. This graduate staff is already stressed by routine diagnostic, teaching, and

administrative duties, and is quite unable to contribute significantly to the research programme. By contrast a similar project associated with the South Australian Cytology Service involves the greater part of the full-time Director's time, and has the full-time services of a Doctor of Medicine, a Doctor of Philosophy, a Master of Science, and supporting technical staff.

Whilst it is not envisaged that the investigational programme of the Victorian Cytology (Gynaecological) Service will require a team of this size, it is felt that consideration must be given to the appointment of at least one senior graduate, in a research capacity, if any significant progress is to be made.

EDUCATIONAL PROGRAMME

Tribute must again be paid to the Anti-Cancer Council of Victoria for their continued work in publicising the activities of the Service. Public meetings are still being held throughout the State, these meetings being addressed by members of a panel of medical graduates. There is a continued demand for such meetings from bodies such as the Countrywomen's Association, Y.W.C.A., various Mother's Clubs, etc.

The work of the Service has been publicised in a number of newspaper reports and also in television interview programmes.

During the year the Chief Health Officer wrote to all Medical Practitioners in Victoria, pointing out that the Commission of Public Health was concerned that the number of repeat smears was below expectations, and that relatively few older women were presenting themselves for examination. This letter was followed by a marked increase in the number of smears being received by the Service.

DIAGNOSTIC ACTIVITIES

Approximately 2,100 medical practitioners throughout Victoria are now registered with the Service.

From 1st July, 1968, to June 30th, 1969, 107,794 smears were examined. Thus a total of 372,025 smears have been examined by the Service since its inception.

In the period covered by this report 395 "positive" cases were detected, making a total of 1,123 since the commencement of the Service. Again the total number of "positive" cases includes all those cases in which the cell findings were regarded as "strongly suggestive of malignancy" as well as those in which there were "malignant cells identified".

As indicated previously, a detailed analysis of these figures is not possible as yet. It would be of considerable interest to know what percentage of the total adult female population has been screened, how many women are presenting themselves regularly for re-examination, and the incidence of detection of cases of unsuspected cervical cancer. In addition, it is of importance to ensure that the "positive" diagnoses made cytologically were confirmed by subsequent investigations.

Such information will be available when the data processing procedures discussed above are completed. However, despite the absence of these detailed analyses a most encouraging picture emerges. A large number of medical practitioners are now participating in the cancer detection programme, the number of specimens being received continues to increase, and many cases of unsuspected, frequently early and potentially curable, cervical cancers have been detected.

In the New Years Honours list, Her Majesty the Queen graciously bestowed upon Dr. Ella Macknight, the title, Dame Commander of the Order of the British Empire. Dame Ella has been one representative of the Anti Cancer Council on the Board of Management since the inception of the Service and the sincere congratulations of the Board have been extended upon the recognition of her untiring efforts towards health service in Victoria.

CONCLUSION

The year reviewed has again been one of achievement. The Service is now housed in its own laboratories which are planned for maximum efficiency and are well equipped. In these respects it ranks as one of the leading cytology laboratories in the World. The interest and participation of the Medical Practitioners and of the population at risk continues to increase and a stable and extremely competent staff is available to process the resultant increased work load.

Problems of data processing remain to be overcome and the Service faces considerable challenges related to the needs for teaching and research. As in the past, we look forward to the continued co-operation of the Department of Health and the Anti-Cancer Council of Victoria to assist in meeting these challenges. By its contributions to diagnosis, teaching, and research the Service will continue to make a significant contribution towards the ultimate solution of the problem of cancer.

This Report would not be complete if tribute was not paid to those persons who constitute the Service. The staff members. The Government provides the money, but these are the people who convert that money into an organisation with every reason to be proud of its contribution to the health services of the State of Victoria. And of all these people, none is more dedicated than its Director, Dr. Michael Drake. His tireless energy, his world renowned skill and his boundless enthusiasm are the keys to the high standards achieved by the Service.

Lance Townsend,
Chairman.

W.A. Cross,
Manager & Secretary.