leukaemias, however, maintenance treatment is necessary and will lead to a considerable improvement in survival and remission length.

There is a theoretical advantage in the intensive use of phase-dependent drugs when the tumour cell population is likely to be very small and the patient healthy, but its use in the clinic is controversial and is at present under study. Stopping all chemotherapy is a difficult decision, but some studies have been done in A.L.L. of childhood which show that in this disease maintenance should be carried on for at least two years.

With these techniques considerable advances have been made in the treatment of the lymphomas and acute leukaemias. In some series half the children who achieve a complete remission from A.L.L. are alive, well, and in their first remission at five years. Considerable advances have also been made in the treatment of generalized Hodgkin's disease. About 75% of patients with Stage IIIB and IV disease achieve a remission with MOPP therapy or a modification using vinblastine instead of vincristine and, half will be alive,

well, and in their first remission five years later. In some patients with certain other types of cancer—particularly Burkitt's lymphoma, Wilm's tumour, and gestational choriocarcinoma—remissions have been sufficiently long to be considered cures. Unfortunately, the reasons for the long survival in some patients with cancer are conjectural and may depend less on the applied chemotherapy than host-resistance factors. Nevertheless, the results already obtained indicate that the future holds the promise that further improvements will occur for most patients with cancer and that more will have a normal life-span using appropriate treatment.

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Contemporary Themes

Gynaecological Abnormalities found at a Cytology Clinic

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Summary

A survey was made of abnormalities found on pelvic examination of 2,656 women who attended for cervical smears in the three years 1967-9. Eight women had malignant cells in their smears, and 68 women pelvic tumours, four of them malignant. Severe vulvitis was common in women over 46. Many of the women who had non-malignant conditions were treated though they had no complaints. They were among the most appreciative and subsequently sought out the clinic staff to thank them. It is important that a full examination should be made by an experienced gynaecologist.

Introduction

The aim of this paper is to show the value of a pelvic examination carried out by a trained gynaecologist in women attending a cytology clinic. The purpose of such an examination is to diagnose malignant and premalignant disease of the genital tract and other gynaecological disorders which are the cause of chronic ill health.

Patients and Methods

A total of 2,656 patients with ages ranging from 26 to 78 were examined (table I). There was no selection other than an ex-

TABLE I—Age Distribution of Patients Examined

Age in years	26-35	36-45	46-55	56-65	>65
No. (%) of patients	90 (3.4)	846 (31.9)	1,165 (43.9)	415 (15.6)	140 (5.3)

pressed wish by the patient for the examination. Though initially designed to be a gynaecological survey the examination at the clinic was later extended to include a general medical assessment.

Results

CYTOLOGY

The smear results are given in table II. All patients with positive smears were admitted to hospital for cone biopsy and diagnostic curettage in the first instance. Eighteen patients with abnormal smears but without malignant cells had cervical biopsies and repeat smears. None was subsequently found to have carcinoma. Four patients with positive smears had carcinoma in situ; the youngest was 30 and the oldest 66 years, and all were married with children. They were treated by extended hysterectomy. Three patients with positive smears had invasive carcinoma. They were all clinically stage 1, and aged between 42 and 49.

TABLE II—Age and Diagnosis in Patients with Positive Smears

Age (years):	26-35	36-45	46-55	56-65	>65	Total
Carcinoma in situ ..	1	2	1			4
Invasive cervical cancer ..		1	2			3
False positive smear ..			1			1

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All were treated with radiotherapy in the first instance; one subsequently had a Wertheim's hysterectomy. At the time of writing they remained well with no evidence of recurrence.

PELVIC TUMOURS

Sixty-eight patients were found to have pelvic tumours (table III). Twenty-one of these were lost to follow up. (Another was lost for four years, after which she was found to have a massive increase in the size of her ovarian tumours, having been reassured by her general practitioner in 1968.)

TABLE III—Age and Distribution of Gynaecological Abnormalities

Age (years):	26-35	36-45	46-55	56-65	>65	Total
Pelvic tumour	1	24	41	2	0	68
Vulvitis	0	0	10	17	8	35
Prolapse	0	11	49	33	8	101
Cervical polyp	1	11	36	33	5	86
Monilial/trichomonal infection	1	23	28	4	3	59
Intermenstrual bleeding	2	19	30	0	0	51

Malignant Disease

There were four patients aged 48-65 whose tumours turned out to be malignant. One of these had an inoperable anaplastic tumour of uncertain origin and she was treated with deep x rays. Another patient had an abdominopelvic tumour which was found to be a giant cell lymphoma; she was treated with chemotherapy. The remaining two patients, aged 51 and 62, had ovarian carcinoma. Neither had any symptoms, and the finding of a pelvic tumour was made on routine vaginal examination. The 62-year-old patient was thought to have an enlarged right ovary, and in view of her age she was admitted to hospital for laparotomy. At operation small bilateral ovarian cysts were found, 4.5 cm × 4 cm × 3.5 cm, and histological examination showed a moderately well differentiated papillary cystadenocarcinoma of both ovaries infiltrating the capsules. She had a total hysterectomy and bilateral salpingo-oophorectomy and subsequently was given a course of radiotherapy. She remained well at the time of writing. The other patient was found to have a right sided adnexal mass. There were no symptoms. She was admitted to hospital within two weeks of being seen at the cytology clinic. A total hysterectomy and salpingo-oophorectomy was carried out and histological examination showed a "moderately well differentiated adenocarcinoma arising in an endometrioma of the right ovary." This patient was operated on in November 1968 and was followed up. She remained well with no evidence of recurrence five years later.

Carcinoma arising in an endometrioma is an unusual form of ovarian cancer; only 22 other cases have been reported in the world literature. As is usually the case, it was only possible to make the diagnosis at histological examination.

Benign Tumours

Twelve patients had abdominal swellings equivalent to a 16-week pregnancy or larger. Two of the swellings were ovarian; one a pseudomucinous cyst and the other bilateral endometriomata. Ten were fibroids, but in two cases the fibroids were associated with ovarian cysts (dermoid and an endometrioma).

The remainder had pelvic tumours diagnosed on bimanual pelvic examination only. Of these pelvic tumours four were dermoid cysts (two associated with fibroids), six were endometriomata (three associated with fibroids), one was a fibroma in the broad ligament, two were adenomyosis, both associated with fibroids, and nine were fibromyomata only.

Two patients were followed up for three months and six months. The first was thought to have small fibroids in the

uterus and was symptom free. This patient subsequently developed menorrhagia and dysmenorrhoea and at operation was found to have a dermoid cyst, fibroids, and adenomyosis. The second patient, also symptomless when first seen, developed menorrhagia and became anaemic. At operation she was found to have adenomyosis and an endocervical polyp.

One patient had fibromyomata, polyp, and cervicitis, and she underwent polypectomy, diagnostic curettage, and conization of the cervix. Another had small fibromyomata and cervicitis, for which she underwent diagnostic curettage and conization of the cervix (metropathia). Two other patients had fibromyomata one with a cervical polyp and prolapse also, for which she had vaginal hysterectomy with repair. The other with only fibromyomata moved to the mainland and attended a gynaecologist there.

Two patients attended the outpatient department, where the original findings of small ovarian cysts were not confirmed, and these may have been retention cysts of the ovary.

VULVITIS

There were 35 patients with vulvitis (see table I). All were referred back to their general practitioners, who then sent one-third of them to hospital for treatment.

Two patients had biopsies showing leucoplakia; one was treated by simple vulvectomy, and the other is still being treated with local applications by the dermatologist and being seen at regular intervals. One patient aged 74 had a local vulvectomy and posterior colpoperineorrhaphy for rectocele and deficient perineum. The histological report showed lichen sclerosis et atrophicus. Biopsy examination of another patient showed resolving lichen sclerosis simplex. One patient with a severe pruritis had had this for six years with no treatment. She responded to local applications and was being followed up by the dermatologist. Another patient who had a biopsy showed chronic inflammation only. *Candida albicans* was isolated and treated.

The incidence of vulvitis was 6% in patients over 56, and it was the most common pathological finding in those over 65 (see fig.).

Effect of ovarian activity on incidence of prolapse, vulvitis, and pelvic tumour.

TRICHOMONAL INFECTION

Trichomonal infection was a slightly more common finding in the 36-55 age group, where it was found in 1.3%-1.6%. Surprisingly, it was found in 1% of patients over 65 but not once in the 26-35 age group. It is difficult to explain the low incidence of trichomonal infection in the youngest age group. Possibly young women were more likely to complain of vaginal discharge or discomfort and to seek treatment early so that when they

came to the clinic trichomonal infection was not one of the things picked up in this age group. Most patients in this survey in whom such infection was found had not complained of discharge.

CERVICAL EROSION

Cervical erosion was such a common finding that it was not recorded unless very gross or associated with a discharge of which the patients complained or if they had postcoital or intermenstrual bleeding. Erosions occurred in nubile women, and their cervixes contrasted strongly with those of the postmenopausal women. Erosions were most often found in the 46-55 age group where there was also a high incidence of positive smears (0.48%). When erosion was associated with troublesome discharge patients were referred for further treatment.

Discussion

There are numerous papers for screening for cervical cancer which show different detection rates depending on the type of population screened. Our incidence of positive smears was 0.35%, which is similar to the incidence of carcinoma in situ of 0.45% found by Davey *et al.*¹ Marshall² showed a detection rate of 0.1% in a constantly screened population. In contrast is Lapointe's³ report from Canada on inmates of a women's prison, where he found cancer of the cervix in 1.8%. The value of screening in the control of this disease is emphasized in the report of MacGregor *et al.*⁴ from Aberdeen. They show not only a fall in incidence of invasive cervical cancer but also a fall in mortality⁵ rates for the disease, attributable to the comprehensive screening programme being carried out in Aberdeen.

The three patients with stage 1 invasive cancer of the cervix were alive and well with no evidence of recurrence six years after treatment. At the time smears were taken they had no symptoms of disease.

PELVIC TUMOURS

Sixty-eight patients were found to have pelvic tumours ranging in size from a slight ovarian enlargement to abdominal tumours the size of a 30-week pregnancy. Many of these, perhaps most, would not have been found at the examination had it been confined to the taking of a cervical smear. This is commonly done by simply inserting a speculum and exposing the cervix, no abdominal or vaginal examination having been done first.

The two patients with ovarian carcinoma had tumours diagnosed on bimanual pelvic examination. One was the size of a tangerine but in the other there was only slight ovarian enlargement, which in a younger woman may not have been considered abnormal. The patient's general practitioner was unable to confirm any enlargement. This case underlined the importance of a doctor with gynaecological experience performing pelvic examinations. Both patients were alive and well at the time of writing with no evidence of recurrence. Lewis⁶ in his review of treatment in pelvic malignant disease observes that the death rate of ovarian cancer is not an indication of the frequency of the disease but of its high mortality rate, and he further states that improvements in results of treatment of ovarian carcinoma depend on its early diagnosis.

The patients with pelvic tumours were originally divided into those with fibroids and those thought to have tumours of ovarian origin. In the follow up of these patients I have found that though the diagnosis was often right in some cases there were associated ovarian cysts, showing that it can be dangerous to make a firm diagnosis of uterine fibroids (a harmless neoplasm) since an ovarian tumour may also be present. This confirms

Victor Bonney's aphorism, "Only a fool says what a pelvic tumour is."

It is obvious that patients cannot be relied upon to notice symptoms themselves as of the 12 patients who had abdominal swellings equivalent to a 16-week pregnancy or larger not one had noticed an enlargement or complained of any discomfort. On questioning some had admitted to having "let their waist bands out" but thought it was just middle age spread. The patient with an anaplastic carcinoma had also not noticed any swelling or discomfort.

VULVITIS

Thirty-five patients had vulvitis, but not one had been examined by a doctor. This was not the fault of the doctors but of the patients, who were mostly elderly, fat, and shy. Nearly all had pruritis of varying degrees and had used a variety of creams and lotions to relieve it. Some had obtained them from their doctors and had not wanted examinations. Jeffcoate⁷ found a 3-5% incidence of malignancy, showing that the chronic vulval lesion can be very serious and even lethal. He emphasized that one may expect ultimate malignant alterations in instances in which atypia is evident on initial biopsy.

DYSPAREUNIA

At every clinic there were one or two patients who complained of dyspareunia, the complaint being most common in those over 65. The older women had been reluctant to complain to their family doctors, and if the cause was a vulvovaginitis, senile vaginitis, monilia, or trichomonas infection a letter was written to their doctors. Once a letter had been written patients were quite happy to go and see their doctors. If there was no obvious disease advice was given. These patients were most appreciative.

PROLAPSE

Most patients with prolapse were symptomless and merely had it noted on their card, but some had symptoms and did not relate them to the prolapse or did not realize they could be treated. One patient thought her tiredness and inability to stand for any length of time was due merely to her age (52). She had a second degree prolapse and was advised to seek surgical treatment. She had a Manchester repair operation and subsequently sought out the clinic staff member who had made her appointment to express her thanks. She said she felt 20 years younger.

The graph showing the incidence of vulvitis, prolapse, and pelvic tumours related to age clearly shows the effect ovarian activity has on the incidence of some gynaecological disorders.

The importance of a thorough gynaecological examination when cervical smears are taken does not seem to have been assessed in the literature apart from in the work of Connon⁸ who reported on 1,069 cases. Her results are compared with our figures from the Isle of Wight (table IV). In spite of the difference in selection of her patients and the distance across the world there is a remarkable similarity between the figures. She found invasive cancer in 0.09% and we found it in 0.1%. We

TABLE IV—Proportion of Patients with Gynaecological Abnormalities in Two Studies

	No. of Patients Examined	No. of Patients with:				Total with Abnormalities
		Fibroids and Prolapse	Ovarian Tumour	Pelvic Tumour	Prolapse	
Adelaide ...	1,069	45	11	68	101	56 (5.2%)
Isle of Wight	2,656					169 (6.4%)

had a lower incidence of carcinoma in situ, 0.15%; she had an incidence of 1.0%. Many explanations suggest themselves; there was a difference in selection of patients and she used Gram's iodine before taking the smears.

Conclusion

There is an increasing tendency for cervical smears to be taken by nurses, and in many cases patients assume they have had a pelvic examination and "all is well." This practice is to be deplored. I doubt if the two patients with ovarian cancer would have been identified had pelvic assessment been made by anyone other than a doctor with gynaecological experience. It is indefensible to limit a cytology clinic to smears alone and neglect a full gynaecological examination, and to encourage the older patient to attend clinics of this nature are best conducted by a woman. Close co-operation between the clinic staff and the hospital gynaecological department is essential for the follow up of patients. I am fortunate in working in both, which has en-

abled me to operate on and follow up many of these patients personally.

I thank Mr. W. R. Edwards, under whose care patients were managed, and Mr. T. L. T. Lewis for his help and encouragement with this paper. My thanks are also due to the voluntary lay and nursing staff of the cytology clinic and the staff in the medical records department at St. Mary's Hospital, Newport.

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Any Questions?

We publish below a selection of questions and answers of general interest

De Quervain's Thyroiditis

What is De Quervain's thyroiditis and what, if any, long-term effects does it have on the thyroid?

De Quervain's thyroiditis is a rare, subacute inflammation of the gland, believed to be caused by virus infections. It affects women more often than men, and is characterized by sudden onset of pain in the thyroid, sometimes following an upper respiratory infection. The gland is enlarged, firm, and exquisitely tender. Constitutional symptoms of fever, malaise, lassitude, and weight loss are often prominent. Diagnosis is based on the clinical picture, together with the finding of a high serum protein-bound iodine level and suppression of iodine uptake by the gland. Thyroid antibodies may be found transiently in the serum, but the histological appearance, so called giant-cell thyroiditis, is quite different from that of Hashimoto's disease. The course of the disease is usually self-limiting, though it may last several months, with remissions and relapses. Disturbances of thyroid function are exceptional, though hyperthyroidism may occur during exacerbations, and hypothyroidism may be a sequel of the more severe and prolonged illness. In mild cases treatment with aspirin is sufficient. Thyroxine or triiodothyronine have been advocated in order to suppress thyroid-stimulating hormone and prednisolone is valuable in patients with severe constitutional symptoms or in whom relapses occur.

Treatment of Ultraviolet Light Sensitivity

Have melanocyte-stimulating substances any place in the treatment of ultraviolet light sensitivity for outdoor workers?

Skin pigment (melanin) is formed in melanocytes, transferred to neighbouring keratinocytes (prickle cells), and carried to the skin surface, where it is shed in horny squames. It is a complex polymer of tyrosine derivatives and has a general absorption throughout the ultraviolet spectrum. The

pigment acts as a screen for solar ultraviolet irradiation and shields the underlying dermis from injurious rays by absorbing and scattering ultraviolet light and trapping free radicals. The efficiency of this protective function is highlighted in negroes, who do not develop the epidermal keratotic and dermal elastotic changes seen so frequently in caucasoids living in sunny climates. Nevertheless, this protection is not total, as photodermatoses, including phototoxic drug eruptions, polymorphic light eruptions, and cutaneous porphyrias, occur in negroes. Ultraviolet light sensitivity may have several causes. An inherited or acquired lack of pigment (as in fair skinned people, albinos, and vitiligo) or photosensitizing substances which either circulate in the blood (for example porphyrins and phototoxic drugs) or are in contact with the skin (such as tar and perfumes containing oil of bergamot) may be responsible. Some skin conditions, for instance, herpes simplex and lupus erythematosus, may be provoked or worsened by ultraviolet light, and there are a group of patients where no cause for the characteristic rash has been found (polymorphic light eruption). Thorough investigation, including action spectrum studies, is often necessary to define the exact nature of the sensitivity.

The psoralens are the only commercially available melanocyte-stimulating substances and have been used extensively in the U.S.A., where after oral administration they have been shown to lessen sunburn, promote tanning, and repigment patches of vitiligo in some patients.¹ As yet it has not been shown convincingly that they help patients with polymorphic light eruptions. Gastrointestinal side effects occur, though fears about their hepatotoxicity have not been substantiated, and their long-term side effects are unknown. Ultraviolet light sensitivity in outdoor workers should be investigated in detail and a cause sought and eliminated. Psoralens will be advised in very few situations and should be used only under specialist supervision. For the time being most patients will have to put up with wide-brimmed hats, gloves, and use local screening preparations. If these are unhelpful they should look for indoor employment.

¹ Symposium on the Psoralens. *Journal of Investigative Dermatology*, 1959, 32, 131.