An Unfortunate Experiment at National Women's

By Ann & Phyllida Bunke

Real the original Metro article, published in June 1985, that exposed the practices of doctors at New Zealand's leading women's hospital. The article by Jacinda Ardern and Phyllida Bunke led to a Commission of Inquiry, headed by Justice Siris G. Cantrill, that helped strengthen patients' rights and led to the establishment of a national cervical screening program.

In October 1985, Ruth, not her real name for legal reasons that will become clear later, is this story returned from National Women's Hospital and told her workmates she felt she'd just been to Auschwitz. "I feel as if we've been experimenting on me," she said. Ruth's fellow workers thought she was being ridiculous and told her to get off her chest to the back of her mind.

It was over 30 years since Ruth had made her first visit to National Women's Hospital. She had been a teacher then, and a 27-year-old suburban mother of three small children. She had failed UE and with "the disadvantage of no education" remembers herself as the "the one student who merely did what she was told." She had been referred to the hospital by her general practitioner after a "suspicious" cervical smear. Having a cervical smear means that cells are collected from the surface of the neck of the womb using a tiny brush and then examined in a thin slice across a glass plate so that this structure can be seen through a microscope.

At the hospital Ruth was told that though her smear was "suspicious," nothing more serious was going on. She came home and reassured her husband that she didn't have cancer and that there was nothing to worry about. "That," she remembers, "was the frame of mind they put me in from the beginning.

Six months later she had an examination of her cervix with the colposcope, a powerful magnifying instrument and a single punch biopsy removed a fragment of tissue the size of a rice grain for scrutiny in the pathology laboratory. In the space of the next six months, Ruth had three colposcopes and three biopsies were taken. She felt confident that she was being carefully watched.

In mid-1985, Ruth became pregnant. Her GP was satisfied when she told him about the pregnancy. "What do they think of National Women's?" he asked. Ruth said she was once at the hospital and it was empty and her GP asked that he was to know what he was doing. In March 1986, Ruth gave birth to her fourth child, a healthy eight-pound girl.

The doctor Ruth saw at National Women's Hospital was Associate Professor Herbert Green. What Ruth didn't know was that Green was carrying out research on his patients and that her case had already been written up in a medical magazine. Herbert Green was an expert on cervical cancer.

Dr. Herbert Green.

He was on the world circuit, attending conferences and publishing frequently on the subject in prestigious gynaeological journals. From 1961 to 1962 when he retired, he saw virtually every woman at National Women's Hospital with invasive cervical cancer and many of the women who had earlier or "precancer" stages, a total of some 1800 women.
Professor Green became a man with a mission. He wanted to save women from mutilating surgery and to do so he had to prove at first what he had suspected and eventually came to believe: that CIS (cervical intraepithelial neoplasia—premalignant disease which hardly, if ever, progresses to invasive cancer) is treatable.

Cancer was once a killer. In 1910, he qualified from Otago Medical School in Dunedin. He applied for a job as a hospital surgeon. His application was rejected. A distinguished representative of a Chicago hospital, he was a powerfully built man who towered over his colleagues. In 1948 he took a position as a house surgeon at National Women's Hospital in Auckland. He immediately became involved in the treatment of cervical cancer.

National Women's was in its infancy. It had opened in 1910 to provide for the post-natal baby boom. The powerful Obstetric and Gynaecological Society, wishing to consolidate its power by controlling the teaching of obstetrics and gynaecology, pushed for the establishment of a postgraduate school based at National Women's. With the support of the Auckland business community, it endowed a professorial chair. An Australian, Harley Carey, took up the position in 1944. Carey was liberal in his view, and would ultimately fall foul of the taboos by advocating less medical interference in childbirth and opposing a specialist monopoly of the planned unit. Carey was also keen to test the use of cytology in the detection of cervical cancer.

National Women's Hospital had inherited responsibility for the treatment of cervical cancer from Ward A at Auckland Hospital. It took cases from the whole of the northern half of the North Island and by 1954 a specialised clinical team had been set up.

Invasive cervical cancer is described as "the most miserable of cancers". In the days before cytology it was not always detectable until an advanced stage when there would be the usual bleeding from the uterus or a visible growth on the cervix. The only treatment was by surgery, radiation or radium, and in the early 1930s surgery was recommended at National Women's as an additional treatment. Invasive cancer was thought to go through earlier as "precancerous stages". These stages were called dysplasia, or abnormal cells, the most abnormal cells being carcinoma in situ, or CIS (pronounced kyz). CIS was believed to be a precursor to invasive cancer.

A smear from the cervix might reveal cell changes in the earlier stages. The theory was that if cancer could be detected before it reached the advanced invasive stage, it might be possible to remove it and cure the disease.

Carey knew that at nearby Greenlane Hospital Dr Stephen Williams' cytological smear tests of opium had been successful in detecting an unsuspected lung cancer.

He knew that in New York, Dr. Paparinozini, inventor of the "Top Stent" was "smoking away about his case". Carey went to Williams, and as Williams recalls, beguiled him to do a trial run of 1000 cervical smear tests of women entering the hospital for cervical cancer. "Of course", he remembers, 'long before we had done 1000 at about two hundred specimens, we had seen an extraordinary number of carcinomas in situ with cancer cells spread right across the smear. There had been no such lesion on the biopsy which was taken on her cervix. Carey was dumbfounded. We did a biopsy test of the cervix and discovered loads of CIS in the tissue'.

With this success, the programme did not stop at 1000. It continued and a full-time cytologist was appointed to National Women's to set up a laboratory to train staff. He was sent to the United States to study cytology at first hand, and on his return the Paparinozini grading sequence was introduced. By 1957 the "Top Stent" was offered to all doctors in New Zealand.

Carey was evangelical in his belief of the benefits of screening. Researchers Williams: Carey raced around like a bee in a hive. He wrote an article for the Women's Weekly saying that cervical screening could save lives. He concluded that he could cure five lives for every 1000 smear tests, a widely exaggerated claim in it turned out.

By 1954 the hospital cytology service was seeing 30,000 specimens a year. The year before, National Women's had shifted from its original Cornwall Hospital premises in a new $8 million purpose-built premises in Claude Road, Epsom.

It also had a new head, Londoros Dennis Bonham, elevated to status of professor from a position of lecturer at University College Hospital, London.

A new cytology block was put out in tender in 1955, but by this time Herb Green had stepped in and said he was having doubts.

Green had joined the cervical cancer clinical team in 1955. He and another embryologist had done a limited number of assays in 1943, but had been out of the country when the major initiatives on cervical cancer were taken. Green wasn't convinced of the idea of progression of the disease, that carcinoma in situ developed into the potentially invasive cancer. He argued that invasive cancer was probably a quite separate disease. His theory was that if there was little or no progression, then CIS was not a harmful disease and screening for cervical abnormalities would not lead to a reduction in the incidence of invasive cancer. This was the position he would express for the next two decades.

When Bush first visited National Women's in August 1948, he had no idea that there was any debate about cervical cancer or that her doctor had controversial views. She was quite sure that it was the best of hands. She was put on the waiting list for a cone biopsy, an operation which removed a cone-shaped piece of tissue from the cervix which could be checked to see that all abnormal tissue had been taken out.

But the day following her admission for the cone biopsy, after preparations for the operation had been made, Professor Green told her that he had decided against operating and she was discharged without any treatment. Every few months after this truth was recallied to the hospital where she had further smears, colposcopic examinations and occasional punch biopsies.

The purpose of a punch biopsy is to diagnose what the disease is and how far it has gone. It enables the pathologist in the lab to scrutinise a small section of the cervix under the microscope, look at the cells and see what they are doing. Very occasionally a punch biopsy can cure CIS, but it is more unlikely as the sample is so minute. It has never been regarded as treatment for cancer.

Treatment involves more extensive surgery to remove the cancerous cells, the object of any treatment being to return to a normal (normal) smear.
Ruth's first punch biopsy in 1965 showed a carcinoma in situ, a diagnosis which would be misleadingly entered on her records for 15 years. Her smear tests were almost invariably positive (abnormal), and the reports described the cells as 'suggestive' or 'strongly suggestive' of malignancy. But this Ruth did not know.

Many years later, in 1985, Ruth would see her hospital file and finally learn that from her first visit she already had carcinoma in situ. In 1966, and over the years, the words were never mentioned.

By May 1967 the colposcopist entered in her notes that he had observed that the abnormal areas on Ruth's cervix had increased in size in the two years since the first colposcopic examination. By the end of that year he recorded 'preinvasive changes in extent and degree'. Throughout 1968 and 1969 Ruth's smear reports were 'suggestive for malignancy'. But still nothing was done.

In March 1970 Ruth was admitted for a curettage of the uterus (a scraping out of the lining of the uterus) and wedge biopsies.

A worse biopsy takes a rather larger piece of tissue than a punch biopsy but it is also used mainly for diagnosis although rarely it can be a cure. Ruth's pathology report showed carcinomas in situ in all the specimens and in one "invasive lesion of the cervix". This is the first sign that the cancer is penetrating deeper layers of cells and becoming invasive.

Despite this, Ruth was again discharged. She returned for smear right through 1970, each one showing cells still "suggestive or conclusive for malignancy".

Ruth still had the disease and still did not know it.

by the early sixties, the idea of the progression of cervical cancer through precancerous stages was generally accepted in the medical community. But the disease was not completely understood and there was room for argument. The cause of cervical cancer was not known. How often it progressed and how quickly it was, was the subject of debate. It was strongly argued that widespread screening programmes would reduce the incidence of cancer by detecting it earlier and the large programme underway in Britain, Australia, Canada, was being watched with interest.

Women with abnormal smear were slightly investigated further by biopsy to diagnose more accurately the stage of the disease. The standard treatment for the precancerous stage was cone biopsy.

Cone biopsy is described as a "nasty operation". Hemorrhage needing emergency treatment is a not an uncommon problem and the woman's chances of conceiving afterwards can be significantly reduced. The cervix can be so scarred that menstruation can become difficult and very painful.

For carcinomas in situ the standard treatment was hysterectomy, a major operation involving removal of the uterus or womb which therefore rendered the woman sterile.

Twenty-five years later Herb Green can remember in vivid detail some of the cases which distressed him most. A young poet had her university degree conferred in a ceremony in Walf in a week before she died of cancer of the cervix. "When you are a young attractive woman who makes a wonderful friend for a man, a little younger than yourself, when you see her die, it's not nice. That's why I've been so vocal. This is bad for mankind. I realised at the time she wasn't the only one under 30, if we were four, he recalls.

He remembers two another patients who gave him the clue which focused the basis of his theory. He calls her "the little girl who put me on the right track." Green performed a biopsy disclosing CIS, but the woman's "refused a hysterectomy. "Two years later she had a baby. She's still alive, living somewhere round Walsingham." Green was concerned at any reduction in women's fertility. He was an opponent of abortion and with his gynaecologist colleagues Patrick Dunn and William Lilley, later played a leading role in the early days of the Society for the Protection of the Unborn Child (SPUC). He took such an uncompromising view of abortion, calling it murder, that he was used to present the extreme anti-abortion view to Auckland Medical School students. At one stage he ceased a future at National Women's by refusing to work with doctors performing abortions.

On maximisation he held conservative view. He would see virtually no grounds for it medical or social, as he was so determined that abortion would lead to the desired result. Once sterilised, he said, a woman had "thrown away a unique possession".

Professor Green became a man with a mission. He wanted to save women from mastectomy surgery and to do so he had to prove what at first he had suspected and eventually came to believe: that CIS was a harmless disease which hardly, if ever, progressed to invasive cancer.

Green's belief led him to treat some patients less extensively. He stopped performing routine hysterectomies in women with CIS and instead performed cone biopsies, checking by pathology tissue diagnosis that the complete tumour had been removed. In 1998 he was able to report that no patients treated this way had progressed to invasion.
There was no hospital plan to seek the agreement of the women to their unorthodox management. Then, in the Rush, they were unaware they were getting anything other than standard management for their disease.

Time had shown that Green was correct in arguing for more limited treatment of CIS patients. Many women were saved from unnecessary hysterectomies, and by the mid-sixties cone biopsy for CIS had become standard treatment.

Having made a breakthrough and having produced what looked like support for his hypothesis, Green publishd the limits of his theory further. Many other medical authors had published papers in the fifties and early sixties estimating that CIS progressed to invasion in a "variable proportion of cases. Green proposed "to show that invasive lesion is probably benign in the great majority of cases" and in question the view that screening programs could eliminate invasive cancer.

He began to test small groups in unorthodox ways. At least five women, and possibly as many as 16, had hysterectomies without prior biopsies to diagnose what was happening to the cervix. Green had only looked at the cervix with the naked eye and selected a Curette. A Curette can reveal an abnormality, but a biopsy is necessary to accurately say what stage the disease is at. Earlier, Green had always argued that biopsies were vital for proper diagnosis. In these cases he'd avoided this step. One result was to provide him with intact cancer lesions to study in the laboratory.

In Green's words, these patients formed "a special series in which invasive cancer has been ruled out as far as possible by clinical [looking and listening to the patient] and cytological methods before hysterectomy, serial section studies of lesions, thus undiscovered by biopsy are being made and will be reported separately."

There were two dangers in performing a hysterectomy without biopsy. First, a healthy womb might be mistakenly removed. Second, and possibly fatally, if the womb, in fact, has invasive cancer. It would be difficult to treat optimally with radiation therapy after a hysterectomy. In this treatment, radioactive rods are inserted through the cervix to sterilize the uterus and adjacent tissue. With the womb removed, the rods could not be put in place.

Because in these cases Green had not done biopsies before surgery, the only way to detect the seriousness of the disease and see if more treatment was needed, was to immediately examine the excised wounds in the pathology laboratory. Before this could be done, Green took some of the wounds with him to New York when he left in 1953 on a year's LeRettele Scholarship.

Two months later, National Women's received a note from New York. Green was reporting that one of the wounds had shown the woman actually had invasive cancer at the time of her hysterectomy. Despite more extensive surgery, she died two years later.

In other groups of patients the abnormal tissue was not completely removed, or Green "empowered" - that is delayed - further treatment, despite positive smears coming after cone biopsies. This, he acknowledged in writing, "may appear foolhardy to those who believe in a high chance of progression of the disease to invasion."

Although it is clear from Green's writing that he knew his was a minority view, and that he was providing unorthodox treatment, he did not think the patient should be the one deciding. "If we are uncertain about the natural history of the disease which cytology has revealed in her, how can we possibly expect her to make what is really her decision?" he asked.

Green justified his unusual handling of cases by insisting that he always rigorously excluded the possibility of invasive cancer before deciding on limited treatment. He also produced his results in vindication of his methods. For each of the studies he located that a single case had progressed to invasion.

In April 1965, Green embarked on another study. Between this date and June 1966 the rate of cone biopsy at National Women's doubled, peaking at 160 operations annually before falling to below 40 in 1966. Wrote Green, "900 [cone biopsies] were performed by the author as a special study", one of the aims being to "clarify an interesting and important correlation between the grade of the prior smear with the later histology (tissue diagnosis) report. In nine women, the smears had shown nothing wrong. Their cervixes were only cased because they "looked suspicious."

In fact, the post-operative histology report showed that five of these women only had cervicitis, a mild inflammation of the cervix in no way requiring such drastic treatment.

By the mid-sixties Green was so convinced CIS was harmless he even argued against the necessity for cone biopsy, a proposition he decided to test by omitting the cone biopsy on some women. This could have been the reason for the cancellation of Rush's cone biopsy in 1964.

In June 1966 Green finalized his experiment and gained permission from the Hospital Medical Committee to manage a group of women "conservatively", that is, to withhold conventional treatment of cone biopsy or hysterectomy. The women selected were under 50 and the possibility of existing invasive cancer was excluded by patch biopsy performed by a colposcopist looking at the magnified cervix.

Colposcopy was introduced to National Women's in the mid-sixties. The colposcope sharpened the view of the cervix, enabling abnormal cells be seen in a way they could not be by the naked eye. The site for biopsies could then be carefully chosen, rather than the more random method of the past.

In the women Green managed "conservatively", the lesion was to be damaged as little as possible by the biopsy, and despite containing abnormal positive smears, the women were to get no further treatment. Other women who had abnormal smears after initial treatment, such as cone biopsy or hysterectomy, were also to receive no more treatment. According to a paper by Green, by the end of 1966, some 73 women with evidence of persistent, uncorrected CIS were being followed. Twelve of these had diagnosed microinvasion of the cervix. Sixteen had only a patch biopsy.

Differences of opinion over the best treatment for CIS were one thing but there was always uncertainty in the medical community about the object of treatment - to return to a negative or normal area. A positive smear was a sign that treatment
had not been successful, that there was still disease present and there had been no "cure" in such cases. Further treatment was called for, until the uterine became normal.

This was never the intention of the National Women's experiment. Some women with evidence of the disease were to be left. They would be followed - that is, brought back for regular aunts and possibly more biopsies, but there was no intention to cure them.

The causes of this are many. If the initial diagnosis was incorrect, women might unwittingly be enrolling an advanced stage of the disease. Women might ultimately need unnecessarily extensive treatment to cure a worse disease. They might even die, for once the cancer has become invasive, treatment will not always halt the disease. In addition, if they failed to attend for follow-up, missed appointments or moved overseas they were at serious risk.

But by watching these women, Green hoped to observe the natural history of the disease and prove his thesis, that untreated CIS rarely, if at all, led to invasion.

The views "natural history of the disease" are important and need to be emphasized. "Natural history" means what the disease will do if it is not interfered with by medical treatment. Many overseas researchers interested in cervical cancer would very much have liked to study the natural history of cervical cancer, but it was considered unethical to do so. If you believed in the progression of the disease, as they did, you could not risk women's developing the potential fetal form but not treating its precursors.

Dr. Green has repeatedly stated in his papers, and as far as this issue is concerned he is completely correct.

"On the other hand, neither he nor anyone else can predict which one of the precancerous lesions will progress to cancer and which will not. Therefore all must be treated."

"Dr. Green is a senior and generally respected gynecologist who is a well known contrarian. I must stress though that the most serious observers of the cervical cancer scene do not agree with his views."

Dr. David Boyer, director of the Cancer Council's Agency of British Columbia and author of the studies which have convinced the rest of the world of the efficiency of cancer screening makes a similar comment. "unless the whole lesion was removed, it was not possible to know whether there was some beginning invasion. We have never considered that it was appropriate in man to study the natural history in this fashion because one never knew what one was dealing with unless the whole lesion was removed.

Ralph Richter, professor in pathology and chief of the division of Obstetrics and Gynecology, Pathology and Cytology at Columbia University College in New York, is more forceful. He doesn't think the study should ever have been started. "For the last three years and certainly by the mid-sixties, there was little debate on the fact that CIS progressed. The weight of evidence at the time was that CIS progressed. The weight of evidence at the time was that CIS was a precursor. Others had conducted long term studies on the disease but had used CIS as an end point. It was absolutely unacceptable and unethical to follow people past that point."

Richter believes that most cervical lesions progress if the women live long enough for that to become evident. "At best," he says, "99% will progress within 10 years."

There was debate about progressors in the sixties but the debate in the rest of the world was about the progression rate, not whether it did or did not progress.

In one of his papers, Green quotes the famous New Zealand gynaecological pioneer, Professor Michael, Professor of Obstetrics and Gynaecology at Otago University is having said in 1966: "To regard carcinoma in situ as not being a killing disease is comparable to giving a stool to a paracetic."

In another paper Green quotes the opinions about progression held by others at this time: Hatt et al (1963) 100% progression rate, Green (1963) 10% progression rate. Boyer et al (1963) 10%, Greenbaum et al (1963) 10% progression rate. McGrother and Butterfield (1963) 25%. McGrother (1963), 10%.

These figures are quoted to show that Green was not alone in a lighthouse. His opinion was not shared by the medical community and he knew it. A 1967 paper in an Australian medical journal was headed: An Appraisal View. In it Green said that "convinced and respected gynaecologists in this country and many in the Western community have been almost disdainfully under-control" and that "it is clear that the author's experience with cervical carcinoma in situ is at considerable variance with that of the great majority of others." He called others' belief in progression a "dogma" which had become "impossible and almost unchallengable" and he set about challenging it.

Professor Green described the purpose of the experiment this way: "The only way to study the problem of what happens to in situ cancer is to follow indefinitely patients with diagnosed but untreated lesions. This is being attempted."

Discussion of the ethics of the study never appeared in his papers, perhaps because he believed as absolutely that women with CIS would not develop invasive cancer. Green has written: "If the physician does not worry too much about the disease then neither will the patient."

Consequently, patients like Ruth did not know they were being studied, nor that they were being treated in an unorthodox way. In his paper The Natural History Of Cervical Carcinoma in Situ Green described the arbitrary manner in which women were selected. "No clear pattern of selection is discernible, and subsequent treatment was most often a matter of chance, dependent on the views of the consultant under whom the patient was admitted - and, therefore, entirely on what day of the week the patient was referred to the clinic."

It has been impossible to discover whether all the patients given limited treatment were Herb Green's. Neither the present medical superintendent of the hospital, Dr. Gabrielle Collison, nor the head of the gynaecology school both then and now, Professor Dennis Bostrom, could answer this question, although Bostrom said other doctors referred CIS cases to Green "because of his interest."
In answer to a question about whether women were told there were differences of opinion about the methods of treatment, Green replied, "I suppose not."

In answer to the same question, Professor Pembah said, "I wouldn't know, you would have to ask each individual doctor who treated patients."

There was no hospital plan to seek the agreement of the woman to their uncoordinated management. Thus, like Ruth, they were unaware they were getting anything other than standard management for their disease.

In 1954 there was no ethics committee in the hospital. At that time, no hospital in New Zealand had one. The study was passed by the Hospital Medical Committee of which Pembah was chairman.

But despite the lack of an ethics committee, international standards for humane experimentation did exist. Ethical standards for human experimentation had been set by the Nuremberg Code in 1947. The code was the first serious attempt to produce a universal code of conduct for doctors and scientists engaged in medical research involving human experimentation. It formed the basis for all subsequent codes, most notably the World Medical Association's Declaration of Helsinki, first issued in 1964 and revised in 1975. Its central principle is an unequivocal statement of the need for informed consent.

The National Women's experiment, it appears, violated most articles in the code.

In 1956, Ruth attended the National Women's colposcopy clinic where the colposcopist, Dr. William McIndoe, observed "dramatic changes" in her cervix. The abnormal area visible under the microscope had increased. McIndoe arranged for Ruth's admission for a cone biopsy which Green performed a month later. The histology report showed microinvasion of the cervix and that the cancer had not been completely removed.

When Ruth returned eight months after the operation for a further colposcopic examination, McIndoe was worried about a small area of unremoved abnormality extending into the vaginal wall and her continuing positive smear. "I would be more entitled clinically and scientifically," he wrote, "since this should be quite possible quite safely and easily, to remove this small area which remains." Green was out of the country and McIndoe performed the operation himself. The tissue she removed showed remnants in situ.

In 1971, for the first time in seven years, Ruth's next smear was relatively normal with no evidence of malignancy though this would not last. By the end of the year, she was once again showing evidence of malignancy.

Despite this, for some reason, Ruth had no colposcopic examination by Dr. McIndoe after 1972.

By 1971, Dr. Bill McIndoe was a worried man. He did not like some of what was happening at National Women's. For more than 10 years after he arrived at National Women's he was the only colposcopist in New Zealand. He trained many practitioners of the new specialty in his clinic.

Cynically, Dr. Stephen Williams describes McIndoe as "professionally very careful, exact and accurate. He was a worrier to some extent, and at times he was in an enormous dilemma about all this business."

According to a later colleague: "He was worried sick about it. He could see people dying and that the standard wisdom being taught was wrong."

Bill McIndoe is called by those who knew him "very religious," "a lovely bloke" and "shy." He died in late 1984, of a heart attack, aged 88.

For 10 years Bill McIndoe opposed what he saw happening at the hospital. On June 20, 1954, when Green put forward his proposal to study the natural history of cervical cancer on National Women's patients, McIndoe objected. At the weekly staff meeting he outlined his fears in a memorandum to which he spoke at length: "As one present state of knowledge, rather than owing to an extremely conservative position with respect to treatment, I feel the correct course would be to aim to remove tissue responsible for the positive smear." He called Green's management "inadequate" both from the point of view of diagnosis and treatment.

However, McIndoe was not a member of the Hospital Medical Committee, the elite group which controlled practice at National Women's. The HMC was chaired by Professor Brenchley and comprised the ship's doctor, Dr. Alger Weir; Green, leaders of the hospital's clinical teams; the radiologist; and the head pathologist.

Later is the day of June 20, 1954, the HMC approved the Green proposal. McIndoe did not get a chance to express his views at this meeting, views which apparently were supported by at least some of the non-HMC medical staff.

The dangers McIndoe saw were two-fold. First, that by limiting diagnostic biopsies a smoldering invasive cancer could be missed. Second, that by delaying treatment or not completely removing abnormalities, risks were being taken with women's lives.
It was an unequal battle. At this stage McIndoe's was a lone voice. McIndoe is
described in his obituary as a "kindly, self-effacing man of complete integrity [who] could
outstand sham or hypocrisy in any form. He was a good man whose high
principles shone through in his whole life."

Had it not been believed in passionately in the wrongness of the National
Women's experiment, McIndoe would have been content to work behind the scenes,
developing the scientific basis of cytology and colposcopy. He had come late to
academia, after training as an electrician, and when he arrived at National Women's
he never quite fitted into the powerful inner group which ran the hospital. It was
this unlikely person who challenged Associate Professor Herbert Green.

Almost everybody, supporter and opponent, comes up with similar
descriptions of Herb Green. "Demurely," "bequestively" and a man who could not bear
criticism, are some of his detractors. A member of the non-medical staff who
described Green affectionately as a "kind, cuddly swell" based on a man who also talked
of his propensity for "getting on his high horse. He was right and everybody else was
wrong. He always had the last say."

McIndoe's struggle to end the experiment is called by a friend "the battle of his
life." His attempts became more desperate as the tragic scenario he predicted
unfolded in the cancer clinic. It was McIndoe who was operating the colposcoop,
who could see through its powerful magnifying eye the troubling abnormal
patches on the cervix of the women he examined. When these women were
brought back again and again without the treatment he could see they needed, he
could not bear it. Green was the consultant and had responsibility and ultimate
control over treatment. McIndoe could not interfere directly in the consultant's
decision-making. "I have been powerless to interfere," he wrote.

Although McIndoe and Green argued that it was difficult to cope with, he
persistently challenged his limits in investigating and in person. In 1959 in a long memo he discussed
disagreement about specific cases. Later, in 1973, he and Green locked swords on
five occasions, once prompting Professor Monte Liggins to intercede by asking
"Are you two still at it?" McIndoe described these confrontations as "vigorous
interrogations."

The response said McIndoe at the time, was that Green "was only well, but does
not always know what is best for him. I have endeavoured by all
means possible to encourage that spirit in which I have always produced the best of
results."

Beginning some time in the late sixties McIndoe began keeping a list of patients
who were causing concern. As the years went on, the list grew longer.

By March 1978 there had been a death. A full year had elapsed between th
date this woman's punch biopsy had shown CIS and the date she was brought back for a
more extensive surgery which showed invasive cancer. Despite a Wertheim hysterectomy
where the internal organs are removed before the uterus, ovaries
and upper vagina are removed, she died.

"It was difficult to cope with," McIndoe wrote in a memo, "to maintain a high standard of
reporting of the cytology work in such a climate. What can I say to a surgeon
who raises an obviously malignant gauze at the screening stage who replies, "What
difference does it make anyway, they are not going to take any notice of the result?"

In 1978 the National Women's Hospital Tumour Panel was established with
Bill McIndoe as convenor. It is not clear exactly who was responsible for the
evacuation of the panel, but the purpose was to open up discussion of particular cases of
gynaecological cancer.

By this stage, McIndoe had already joined in his campaign by Dr Jack McLean, the
chief pathologist at the hospital. McIndoe's unhappiness in colposcopying the same
interests women over and over again was manifest by McLean's experience in the
undergraduate laboratories of National Women's.

Under the microscope he viewed thin strips of tissue taken by biopsies and he was
aware that he was reviewing the same tumors in the same women over and over
again. When he reported that the specimens showed CIS, or micro-invasion, or
suspected invasive cancer; he was aware these alarming reports were not always
acted upon. In other hospitals such reports would have resulted in prompt
treatment.

In addition, there had been conflicts between McLean and Green about diagnoses
from pathological specimens. Green would ask for particular slides to be brought
to his room where he would sometimes write his own diagnoses beside McLean's in
spite of the fact that he was not a trained pathologist.

McLean calls cancer 'an appalling enigma. Every 1 of the 100 treated females
will develop another cancer. A woman who has CIS is at risk of developing
something many years later. Positive cytology is a red light at a corner. Continuing
positive cytology always requires treatment.'

At National Women's the red light was not always being heeded.

McLean says that junior resident doctors came along to the Tumour Panel
meetings to be entertained by hearing Green, McIndoe and McLean slugging it
out.

Any staff member could come to these meetings and anyone could introduce cases.
As far as McLean was concerned, this was "prospect," "not meant as an official case,
could be brought out into the open and discussed.

It provoked the patients and ensured they could be treated in an orthodox manner.
At one joint meeting of the pathologist people introduced an amendment that cases
could not be introduced by the pathologist, only by clinical people, but it was
debated by a majority of the Hospital Medical Committee.

'The Tumour Panel, however, was not a complete answer. Cases could only be
discussed once a day. It was,' says McLean, 'like Lord Shaftesbury. We could not
get everyone out of the mines at once.'

In 1980 McIndoe decided to take more formal action. Eight years had elapsed since
the institution of the study and his attempts to prevent limited treatment of
patients had not been successful. He wrote to the medical superintendent, Dr Algar Warren, asking for
"a reappraisal of policy" for cancer
McLean's accompanying memorandum to the superintendent outlined 14 cases where limited treatment, he said, was "not soundly based". All the women were eventually shown to have invasive cancer. McLean continued: "They had probably had it from the beginning but because of inadequate biopsies, it had been missed. In my opinion; he concluded, "these patients have had what can be termed varying degrees of delayed and inadequate treatment for a disease that is generally considered to warrant urgent hospital admission for adequate diagnosis and definitive treatment."

For instance, in one patient's case, McLean called about inadequate diagnosis and "unnecessary delay". CIB was diagnosed in October 1987, but she received no treatment until six months later when a cone biopsy showed microinvasion with possible invasive cancer nearby. More than two years elapsed before this woman had surgery. "Without hysterectomy for invasive cancer of the cervix and vagina.

In another patient the biopsy showed CIB but possibly invasive cancer. No action was taken for a year when another biopsy showed invasive. McLean called this "an example of delay in the diagnostic diagnosis and treatment through failure to heed the warning of the possibility of invasive cancer in the initial biopsy."

In his reply, Green invited that other clinicians were also following this routine of treatment and that other staff were implicated in the policy of limited treatment. He said that by studying the natural history of the disease "a calculated risk that invasive cancer could be overlooked" was always present, but he noted that delayed treatment affected survival rates. For early invasive cancers, he said the 10-year survival rate was 95%, so that patients whose cancers were "overlooked or treatment delayed" were not at a disadvantage.

He cut superfluous on the quality of colposcopy and pathology and complained that McLean kept "the best diagnostic slides from many cases in his own private collection under a dossier index only" preventing them from having access to them.

He regretted that "Dr McIndoe's induction and doubt could cost a long lead in the elucidation of the problem of the natural history of In situ cancer."

Dissatisfied with Green's response, McLean and McIndoe again approached the superintendent with McIndoe listing 100 women whose cases were causing him concern, and McLean concluding with a clear statement of the issues at stake for the women. "When patients are admitted to a public hospital they put themselves in the hands of medical staff with the explicit understanding that they will be provided with at least adequate, and preferably optimal treatment for their complaint. Clinical studies and trials to establish optimal management are at times necessary. However, when in the course of a trial it becomes apparent that patients are a risk, there must be a reappraisal of the trial."

"Despite what Professor Green may say, the consensus of opinion at present is that any delay in the diagnosis and treatment of invasive carcinoma puts the patient at an increased risk. A survival rate of 90% for Stage I carcinoma of the cervix is very good at a statistical level - but not for the four or so women who die from the disease. At our present state of knowledge no one can deny that there is every possibility that with earlier diagnosis and treatment, these four or so patients could be alive."

By this stage, Werren too had become concerned. With him, McLean and McIndoe attempted to take their complaint outside the hospital to the controlling authority. They approached the medical superintendent-in-chief of the hospital board, Fred Moody, and he discussed it with the board's chief executive. Despite the fact that the complaint came from a medical superintendent and two such senior doctors, Moody declined to act.

"The whole thing," remembered McLean, "was thrown back to the hospital to sort out."

The Hospital Medical Committee set up an investigation committee of three senior gynaecologists, chaired by Dr Richard Slackin (now professor at Oregon Medical School). The resulting report, issued in 1976, vindicated the policy of conservative treatment: "It is the firm opinion of this committee that all staff members involved in the implementation of the policy concerned with this conservative management of carcinoma in situ have acted with personal and professional integrity."

The 1971 death which had so concerned McIndoe and which intensified his efforts was put down by the committee to a "colposcopic error", the responsibility for which, of course lay with McIndoe.

By this time even Algar Werren who had been initially reluctant to act, was calling the "report a whitewash."

The committee was spreading, and more doctors were coming to see the validity of McLean and McIndoe's views. Dr Bruce Cole, a member of the HMG, supported further investigation and suggested that McIndoe and McLean give reports to the HMG. As time passed, said McLean, "the better was one case, more and more biopsies were coming back with invasive cancer because of the conservative treatment while Green was going on with his mode of management. Doctors stopped transferring patients and Herb's reservoir of cases diminished."

Despite McLean's belief that their objectives had been achieved, in all the interviews we conducted in the course of writing this article no one could give us an assurance that the experiment ever ended. It was never formally stopped. No instructions were issued to doctors to abandon practices which by now had been shown to be dangerous.

Dr Gabrielle Gilliam, who came to the hospital as medical superintendent in 1981, in answer to our enquiries referred us to Professor Budzisz who as chairman of the HMG, then the Ethics Committee, and head of the Post Graduate School
It is very difficult to discuss the National Women's Hospital experiment with Boshman because he does not concede that it ever took place. Despite the consensus we encountered with other interviewers that this experiment was to study the natural history of CIN and despite Green's documented assertion in paper after paper and in memos which went through Boshman's hands that that was what he was trying to follow, Boshman insists that the subject of the study was quite different.

We must refer here to a problem we encountered in interviewing Boshman which made clarifying his views difficult. He has a tendency towards circumlocution. Several viewpoints can be contained in the same answer to a question. To take an example. When we asked if in some patients "there had been a deliberate leaving of part of the lesion, the excision of only part of the lesion", Boshman replied: "No, no, not deliberate at all. Not deliberate leaving of it, that sounds, that's misinterpretation. They were taking enough to biopsy. We could call it a deliberate leaving if you like."

Above: one thing Boshman is clear. He insists that the experiment was not to study the natural history of the disease. It was, he says, to study "colposcopic control", "to treat the patient by minimum interference so long as the colposcopic control was adequate."

In 1960, he says "it was suggested that it was time we treated people with either less than a hysterectomy or a full cone biopsy. And the offer came from Dr. McLeod that he would be willing to provide colposcopy".

It was McLanach's offer, says Boshman which made the experiment possible. "The theory was at the time that you could adequately follow it [the disease] with colposcopy. That was McLanach's theory."

It is certainly true that McLeod did not oppose Green's plan as strenuously in 1946 as he did a few years later when he could see starkly the reality of its consequences. Nevertheless only a very imaginative interpretation of events could claim that the experiment was to test a theory held by Bill McLanach.

Where others define colposcopy as a diagnostic tool, Boshman refers to its use as "treatment". Of course, if colposcopy is "treatment" it is not possible to claim that no patient went "untreated" for all but colposcopic examinations.

McLanach says Boshman "could have gone on biopsying unless he had taken all the accountability, "an absurd proposition, for they were not his patients and he was known to abhor the practice of some clinicians overseas who subjected women to a great number of biopsies without necessity.

In fact, McLanach objected to his role in the experiment from the start. In 1966 he wrote: "I inadequately discuss diagnostic which can be only the description of the type of biopsy 1st present perform (if this is to be the only biopsy done) and follow up only asking further step if there is clinical or colposcopic evidence of invasion, would seem to me the type of care that should not be followed... If Professor Green's proposal is accepted I feel it would be very difficult to take seriously any cytology reporting or colposcopic assessment."

Although McLanach was clearly unhappy about the limited colposcopically directed biopsies Green expected him to do, Boshman still blames him and not Green for the 1971 death of a woman in the study. "I had the notes out on that one... and I am sure that one case that died was a colposcopic case. I think the biopsies were taken from the wrong part. And I think the person who did that colposcopy is now deceased." This version of events not only unfairly blames McLanach as the colposcopist but ignores the fact that the biopsy showed CIN for which no treatment was undertaken.

Boshman calls the sixties and seventies a "developmental stage" in the treatment of cervical cancer. Although American cancer specialist Ralph Ballard was of the opinion that the study should never have been started, other cancer specialists said that it is the mid-sixties, the proposition was probably acceptable.

There was general agreement, however that by the early seventies, when McLanach could point to dozens of cases which were causing concern, when a great many women given only limited treatment had returned with invasive cancer and when one woman had died, the study should have been stopped.

Boshman cannot give a date for the time the study stopped. When asked who could have stopped Green's research, he replied: "I think it would have been stopped jointly by the Hospital Medical Committee at that time."

Throughout this period Boshman was the head of that committee and after 1972, of the hospital ethics committee, but he in fact took no action to end the study. The usual, he now says, "merged into general treatment. It stopped being a study and became general treatment."

This was perhaps the most disturbing thing that Professor Boshman said. It puts a question mark over the treatment of all the cervical cancer patients who have attended National Women's Hospital over the last 30 years.

McLanach thinks that "peer pressure forced the study to cease gradually to an end."

He is "pretty certain" the limited treatment of women stopped.

McLanach, however, believed "it never came to an end. He said that "Green carried on with varied management to the end of his days."

In the light of Boshman's equivocal statement about the fate of the experiment, McLanach, may well have been right. This view is lent support by what was happening to Boshman in the late 1970s.

After five years of severe suggestive or conclusively for malignancy, Rush was abruptly admitted in 1974 for a ring biopsy, a shallower biopsy removing only the surface cells. All tissues samples showed CIS and the pathologist reported that "the tumour reached the upper cut edge in several slides." Despite this report no further action was taken. 
Over the next three visits to the hospital clinic, Ruth returned normal smear reports which a clinician would usually view with scepticism in view of her history. Ruth was brought back in 1972, but not for treatment of cancer. This time it was because her scored cervix had scarred, or narrowed, so that menstruation had become painful. The operation was to stretch open the cervical canal. She was still returning normal smears but the histology report of scrapings of tissue from the inside the uterus showed "fragments of carcinoma...probably in situ." After her next visit, Green commented on Ruth's case notes that "the histological report is somewhat surprising".

Nurse-in-charge, after one more visit discharged Ruth from the cancer clinic into the care of her general practitioner and gave her a clean bill of health. In his letter to her doctor, he concluded "She has no more chance than the next person of now developing carcinoma of the cervix".

By the date of her discharge in 1979 Ruth had visited National Women's Hospital 34 times. She had had 98 cervical smears, five biopsies, four operations under general anaesthesia and 10 colposcopic examinations, but as the final histology clearly showed, she still had cancer.

But this Ruth did not know when she was discharged. "I had my family were delighted. We believed that Professor Green had mentioned my condition and that I had never approached any condition that looked like cancer."

Green could put aside what Ruth's pathology report showed cancer because he did not believe that pathology was an accurate science. He placed primary value on what the gynaecologist could see with his naked eye during an examination, and in his questioning of the women. He thought an abnormality should be defined by what it did over time, rather than what it looked like under the microscope.

In 1946, the year the cancer experiment officially started at the hospital, Green reported a text he had heard about overseas. He sent sample biopsy slides to five Auckland pathologists, and in only three cases was their verdict unanimous. Twenty years later he quoted this experience to us in support of his long-time dictum of pathology: "How can you base a theory on such impractical proofs? Tradition demands that the pathologist's opinion be accepted but he is just as likely to be in error as the clinician. Diagnosis is uncertain and open to dispute by other pathologists. One man's cancer is another man's normality. Countless women have been subjected to unnecessary diagnosis and treatment. I've resisted the coalition of the pathologist in many cases. Sometimes I've been right and sometimes I've been wrong."

"They want to colposcope everyone now. They want to up all the women in New Zealand. It's a horrible position for a woman."

Because he dissented so strongly the accuracy of diagnoses given by pathologists, Green disputed cases which have been identified as progress in invasion. He asks: "Who said they became invasive? I could dispute every one of them?"

When would be accept that there was invasion?

"When you have an obvious scarring or fungating lesion," he replied, "or the woman dies of the disease."

The year after the experiment started Green wrote that of 360 patients not one had progressed to invasion. The reason for this, he said, was that invasive cancer was "excluded as far as possible at the onset" of the experiment.

Two years later, Green reported in The International Journal Of Obstetrics And Gynaecology that one case had appeared among the women being studied, but he went on to say that this was to be expected since it was within the normal incidence for the disease. Another case he predicted would "probably appear in 1977". He pointed out that his results differed from overseas reports because of his "insistence on the adequate exclusion of invasive cancer at the outset."

By 1984 there had been a dramatic change. In a paper in The New Zealand Medical Journal Green called his previous predictions "perhaps over-stated and must be modified", not because of the "ratio of invasive cancers (as since 1950) but mainly because of inability of present methods to exclude adequately invasive cancer at the outset."

This was a profound shock from his confidence of previous years about the hospital's thoroughness in excluding invasion. Nevertheless it provided a reason of avoiding the more unpleasant conclusion, that his theory was wrong and he had endangered women's lives.

Green discussed seven cases. In only two does he accept there had been "true" progression and both these had had negative smears after his conservative treatment.

In all five other cases where the danger signal of containing positive cytology had been ignored, Green reinterprets the evidence. "From the above case reports it can be seen that the term of progression or not to invasive cancer is clouded by inadequate initial exclusion of invasive cancer...and possible over-diagnosis of invasion." Thus he attributes the apparent invasion to either over- or under-diagnosis by pathology. So-called "under-diagnosed" cases could be dropped from the study thus improving the final figures.

The case details he discusses (not included in the seven cases) is blamed on a mistake of colposcopy.
The bold rewrite of events implicates Dr McLindoe and McLean, both of whom were at the time presiding over Green's actions.

McLindoe was clear about what Green was doing. "He believed that CIS is not a cancer. When it does become cancer, then either it was at the beginning or it isn't now. He plays with the categories of diagnosis." McLindoe had more than Green's seven cases. By the same date, he had compiled a list of 30 cases which were now invasive.

Even fit up to his predilections, Green seemed unperturbed by cases of invasion. He wrote: "It does not seem that it is a very dangerous lesion if only one in 18 incompletely treated lesion progresses to invasion."

Green virtually ceased publishing after this paper appeared. Ralph Bickart says that "after Dr Green was finally silenced, when he didn't publish any more or got on the lecture circuit, I didn't hear anyone doubting that CIS progressed to invasion."

Green's explanations about under-and-over diagnosis point to the ultimate folly of the whole experiment. Professor David Stegg of the University of Ontario Medical School has given a concise summary of the problem with what he calls "the infamous experiment at the National Women's Hospital." Green tries to dismiss the results as being due to either inadequate excision of invasion at the outset or over-diagnosis of invasion later. The latter explanation is hardly credible in the case of those women who have died from their disease, and the whole argument becomes circular thinking. If the experiment was incapable of falsifying Green's hypothesis why was it carried out? Moreover, if invasion could not be excluded confidently at the outset, were the patients warned of the risk that was being taken?

Why did Green persist in the face of the increasingly depressing reality in the cancer wards?

Professor Green's answer would be that he believed what he believed and he needed to convince the rest of the world. As Dr McLean says: "I have no doubt that in his own view Herb was acting in good faith. He believed that CIS was not of any consequence. He felt in his conscience that he was not doing any harm to his patients."

A member of the administrative staff recalls that Green was very kind to patients in the cancer ward. "He saw young women coming in and dying and he would be very unhappy. He took time and talked so nicely to the husbands and relatives." Green himself joined his ability to talk to his patients. He remembers with pride how at his retirement the medical superintendent said his patients "think he walks on water."

Perhaps Green had invested too much in his theory that he was incapable of changing his mind when it became overwhelmingly clear that he was wrong. For 50 years a quote was written on his office blackboard: "Don't confuse me with facts my mind is made up."

Cervical cancer had consumed his attention since the mid-1930s. He had written papers after paper on it, had initiated one of the biggest studies in the world, it was the foundation of his career. Had he been right, he would have been a world leader. By the early 1970s he was over 50 and it was too late to carve out a career in a different direction. Already disappointed when, as acting head, he had been passed over in chief of the graduate school in favour of Dennis Bonham, he was never made a full professor.

In 1967 Herb Green still cases deeply about cervical cancer. In his retirement years he has over 2000 cases filed on his computer and spends much time writing papers that are rarely published. Not only does he doubt cytopathology and pathology, he now rejects other modern technical advances in the management of cervical cancer. He calls colposcopy "the most mutilated procedure for a woman," he bases on it. "They want to colposcope everyone now. They want to up-end all the women in New Zealand. It's a horrible position for a woman." Of the recently introduced laser which allows less destructive treatment he says "It's a toy, a gimmick."

Underlying his attempts to prove his theories there seems to be a kind of fearism about life and a medical nihilism. He was a need to accept the inevitability of suffering and death. "We've got to accept cancer," he says "Cancer is an incurable disease. It must be treated. It is a disease with prolonged life."

Professor Green was not the only player in the tragedy which unfolded at National Women's. But from the professor down, no one but McLean and McLindoe would listen. As McLean said: "For many years I felt isolated. I kept away from the clinic. I felt an antipathy against me. They feared I would open my mouth too wide. They have skeletons behind Herb's back, but they won't confront him. Have you tried arguing with him? Herb's an absolute loner whom stood up to. People were frightened of him. When McLindoe and I tried to stand up to him Green reacted by doing nothing and saying nothing. He's a trained zonk. He's like a missionary who thinks he can do no wrong."

Another scientist said: "I learnt early you produced data and didn't discuss it. There was no point in talking to him. You couldn't discuss scientific validity."

McLindoe added: "It wasn't possible to get the medical profession to take this fellow on. He had a Muldoon personality."

Professor Bonham views the struggle between McLindoe and Green as merely a personality clash. "McLindoe and Professor Green didn't get on terribly well together... if there had been greater harmony among individuals involved in this group of things might have happened a little sooner... Bill McLindoe was a charming chap, but he did have a vicious streak. Which made it very difficult - you can't talk about this really about someone who has died but it is made difficult."

Professor Bonham believes that "in an academic sense you need a few free thinking people to stimulate its various branches. Herb Green was a unique sort of free-thinker. I had to live with him for a lot of my life. Though it was sometimes difficult because of his fairly free ideas, he fitted into the department extremely well and we didn't have problems. No one would be unhappy with the way he managed the patients with cancer. He really looked after them fantastically."
When Ruth noticed slight bleeding between her periods two years ago she was not unduly worried. "I was approaching 40 and thought this could merely indicate the onset of menopause. When I visited my doctor about a painful shoulder, I suggested that I should have a smear test, as I had not had one since leaving National Women's at the end of 1976."

Her latest smear was suggestive but not conclusive for malignancy and she was referred to a specialist. "I took the liberty of reading the referral letter before the appointment. On seeing it my husband and I were alarmed that it mentioned carcinoma in situ. We looked up this term in a medical dictionary and were disturbed to realise that I had been seen for a condition which without treatment could lead to a totally different cancer."

The specialist told Ruth that her National Women's Hospital records revealed that her earlier smears had shown carcinoma in situ. She had in effect, "been sitting on a time bomb".

The biopsy he performed showed that Ruth had invasive cancer.

"I was now facing the reality of cancer. I felt that angry and frustrated. First, Professor Green had never informed me of my condition over the years, nor did I feel that my treatment from 1964-66 had been satisfactory. I had had a ring biopsy performed on me in 1969 when I was 40 years of age. I could not see the point of continuing with biopsy treatment at that age. I had not had a child since 1966 and had no intention of starting another pregnancy in 1976 when my career as a secondary school teacher was well underway. At no time had I been fully informed or given any say in the treatment I received."

In October 1985, Ruth entered National Women's Hospital. For two days she lay behind lead shields with caesium rods inserted into her cervix. Six weeks later she returned for surgical removal of the uterus, tubes and ovaries. She spent New Year's Eve in hospital and was discharged in January 1986.

Ruth was the first of five women to return to the National Women's Hospital with invasive cancer after the publication of a study of the treatment of CIS at the hospital. It was not written by Green. The authors of the study were McBride, McLean, Ronald, Jones, a clinician at the hospital, and Peter Mullooly, a statistician at the medical school. It was published in Obstetrics and Gynecology: The Journal of the American College of Obstetrics and Gynecology, in October 1984.

The authors had gone back to the tissue samples and smear tests for all the women who had been diagnosed as having CIS at the hospital since 1955. The raw data for the 98 women was analyzed, making it the largest study of its type in the world.

The study divided the women into two groups – 88 women who had normal smears after treatment by "conventional techniques" and a second group of 133 women who had continued to produce persistent abnormal smears. This second group is called in the study the "conservative" treatment group. Some had only biopsies to establish the presence of disease and no further treatments. Others had abnormal smears after initial treatment and were not treated further. For example, one woman had 25 malignant smears over 10 years after hysterectomy, but no further treatment.

She eventually developed invasive cancer of the vaginal vault. A most significant finding was that in only 33 of the group-two "conservative" treatment patients did CIS disappear. That is, 85% continued to have CIS, or worse. Twenty-three, or 23% of these women, developed invasive cancer of the cervix or vagina.

"They went through all my personal files from the hospital and from my GP. I can only liken it to a rape case. I felt so exposed and vulnerable."

In contrast, the group-one patient who had normal cytology after treatment rarely developed invasive. Only twelve, or 1.2%, progressed into invasion.

Such enormous differences in outcome demonstrated beyond the shadow of doubt that women with continuing abnormalities not only had a very high risk of developing invasive cancer.

Twelve of the total number of women had died from invasive carcinoma as had four, or 0.4%, of the group-one women, and eight, or 6%, of the group-two women who had limited or no treatment.

There is one small group of women in the study which deserves special mention. Twenty-five women had only a diagnostic punch or wedge biopsy and no further treatment. Of this number only one had a single biopsy with minimal diminution of the lesion. Three were the women who could most clearly show "the natural history" of CIS.

Ten of these 25 women who only had diagnostic biopsies developed invasive cancer. Worse, almost all of the women who had continuing abnormal smears after the biopsy had developed invasive cancer. There were 10 women in this group, and nine of them developed invasion.

The authors concluded the study by saying that "it is, therefore, impossible to escape the conclusion that patients with continuing abnormal cytology run an unacceptably high risk of developing invasive carcinoma compared with women with continuing normal cytology."

The women with abnormal cytology that is, the group-two women, had an 80% chance of developing invasive carcinoma of the cervix or vaginal vault at 10 years, and a 30% chance at 20 years. The study had clearly shown that "CIS of the cervix had a significant invasive potential."

Green's thesis that CIS was a harmless lesion, and invasive cancer a separate disease, had been dispelled by his own data.
When interviewed, Green disputed the findings of this study on the basis that the pathology was incorrect. He could not accept that all the invasive cases were really invasive.

On those occasions when we interviewed him, Green raised the subject of the deaths of the women. Unasked, he said: "It's unfair to accuse me of studies which lead to deaths, when they were part of it."

"But we haven't said that to you," we replied. "Who hasn't?"

Eight of the 21 group-two women died. If the death rate in this group had been the same as in the group-one women, none would have died.

Scientific method depends on the publication of results which disprove as well as those which prove a hypothesis, but Green never completed his study or published the final result himself.

McIlroy and McLean decided to work on and publish the study because they wanted to bring what had happened out into the open. It was drafted and redrafted over several years and statistician Mullins was brought in "to provide a stronger statistical basis for making the statements. They wanted to nail it down more firmly."

"We tried to make it imperious," says Mullins, "so we couldn't be accused of a witch hunt. The ethical issues were drawn and highlighted." Green's name is not mentioned in it.

McIlroy had given some of the data at an international pathology conference in Sydney in 1980. "I got very good feedback from the top gynaecological pathologists in this field. One of the top gynaecologists in the US came to see afterwards and the first word he said was 'forgiveness'. He thought there would be some... because of the efforts on the part of some staff here to sweep the thing under the table we wanted to bring it out into the open and let our peers judge. They'd try to cover it up and shut me up. The finding vindicated us.

"We didn't make it too public in the hospital that we were working on it in the first place, but in general the clinical staff were supportive. They were too frightened to stand up themselves, but were quite happy to let someone else stick their necks out. It's like penguin on an ice floe. They push one in first, and if he doesn't get eaten by the killer whale, they all jump in."

The author of the study hoped the academic world would pick it up and be disinterested when it didn't, as Mullins puts it, "make more of a splash". "There were some reprint requests from overseas," he says, "but none from New Zealand."

If overseas doctors saw the issues, it was not as far as the New Zealand medical fraternity.

Although he agreed that in general scientific findings should be published, Boekhout was critical of the paper. "They were unethically describing Green's cases to some extent: poking the finger a bit at him. There are horrendous in that paper that shouldn't be there."

Boekhout had outlined his concerns in a letter to the medical superintendent in November 1983 before the publication of the study: "I have heard a rumour that Dr McIlroy and possibly another specialist, have been reviewing case of carcinoma in situ that have been managed in the hospital. I have no recollection of approval being given for review of the cases belonging to other consultants, and wonder if they have been reviewing cases by courtesy of Miss Owen (the secretary of the clinic) without the approval of the clinicians concerned.

"This may only be a rumour, but I think it may be worthwhile your having a look at it to be the first instance because any publication emanating from this hospital must be acceptable to the staff of the hospital before it is submitted for publication, as I am sure you will agree."

Mullins said the McIlroy was motivated most to write the paper by concern for the future if Green's attitudes continued to have influence. "He thought Herb Green's theories would fade away and Dennis Boekhout would change his mind."

A friend of McIlroy's tells us that he "went through the agonies over writing the paper. He didn't think anything would be served by pillorying Green, but he wanted to come out in the future, particularly about the effect on doctors trained at National Women's who would not keep up with the research. Green's teaching was still being followed out there amongst the GPs."

While Ruth was visiting her specialist before her hystereomyectomy, he had mentioned that her National Women's Hospital records showed that she had had a cervical smear in 1989. "This threw me a little," remembers Ruth, "for she was quite sure that she had not had another smear test after being discharged from the hospital in 1979."

When Ruth was admitted for her operation, the house surgeons also mentioned that the hospital had received smear reports from her GP. "I told him that I would like to see one of those reports. He passed me my file. On it I saw clearly in print on two occasions: 'Alive and well — with evidence of cancer.' I asked how in the hell my GP could say that when he was not doing smear tests.'"

The house surgeon told Ruth that her GP should have been performing a smear test annually. 'This he had not done. What he had done, however, was fill the hospital cancer clinic follow-up forms as if he had, and return them to the hospital. This he did in 1980, 1983 and 1984. He even provided dates when the non-existent smears had taken place."

When Ruth realised the full enormity of the mismanagement of her case she decided to take some action. She had the choice of proving medical malpractice through the Accident Compensation Corporation and thus exposing some of her sick leave or taking the case against her GP to the Medical Disciplinary Committee. "I had to decide between ACC, which would have been good for me personally, or protecting other women by exposing my doctor." Ruth decided on the latter course.

Ruth describes the disciplinary hearing as a harrowing experience. The hearing was conducted by a trial with lawyers, people sworn under oath and cross-examination. A panel of five men, three doctors, a legal assessor and an ex-
Aparť from her lawyers, Ruth had no support in the courtroom. "They went through all my personal files from the hospital and from my GP. I can only liken it to a rape case. I felt so exposed and vulnerable."

Ruth’s lawyer called a National Women’s Hospital cervical cancer specialist, Dr Jeremy Jamieson, to question him about the hospital’s handling of the case. The committee also wanted to know why the hospital had not acted on the GP’s report of continuing cancer. Jamieson replied that many doctors filled the forms in improperly, and anyway, it was assumed that if there was evidence of continuing cancer, the doctor should have done something about it. Responsibility then was laid at the door of the GP.

Four weeks after the hearing Ruth’s lawyer received the committee’s written decision. Her GP was found guilty of professional misconduct and censured, but in mitigation the committee noted that Ruth had not asked for a smear after being disregarded and said that her doctor had been “influenced by the over-optimistic opinion” of the National Women’s specialist. The GP was ordered to pay the court costs of $155 of Ruth’s legal expenses. This left her with a bill of $1500 for legal fees.

She did not have the satisfaction of helping other women because the committee also ordered that there should be no publication of the doctor’s name in the New Zealand Medical Journal and no publication of details of the findings “in such a way as to identify either the complainant or the doctor” in any other media. For this reason we have been unable to use Ruth’s real name in this article.

“I felt the whole thing had been a bit contradictory. In no other court in the land does a person found guilty have their name suppressed without a very good reason. Why should doctors be immune from the normal laws of justice?”

They say, “...some southern authorities have prescribed New Zealand an epidemic of that disease. Everyone should be screened. We are told that cervical cancer is a sexually-transmitted disease. True, the carriers are not eaten by women, but passed on by cancer for four of us. The scope of even a positive smear.”

On the surface this further and chapter in the mismanagement of Ruth’s illness could be seen as just bad luck. Perhaps Ruth was unfortunate to be under the care of a slipshy GP. There is another more likely explanation.

The audit of Ruth’s GP suggests the whole climate of training about cervical cancer has been affected. Ruth’s GP had done his post-graduate training at National Women’s Hospital in 1989. Consequentely he may have felt justified in not taking further action if he had been taught that screens were inaccurate, that limited value and cervical cancer relatively unimportant. Especially when he read the letter of referral from Green which said that Ruth had no more role of developing invasive cancer than the next woman. It seems that Green’s attitude has spilled over into a negative, sceptical attitude to cervical cancer screening among doctors.

The investigation for this article met with great discouragement from doctors. With one or two exceptions, they said to leave it alone, it was in the past and no good would be served by revelations in the lay media. It was seen as a matter for the medical profession, not the public. Most doctors refused to talk at all, others were encouraging, but declined to be quoted.

However, cancer experts overseas were more forthcoming in their opinions. Most knew about “the unfortunate experiment” at National Women’s. It was not necessary to explain to any doctors, local or overseas, what the experiment had been about. Yet whatever their personal views, the New Zealand medical profession closed ranks to protect the reputation of their fraternity.

The unfortunate experiment is not an issue of the past. It has continuing repercussions for the women who were part of it, those who have to live with cancer now or in the future. But it also has implications for the treatment of cervical cancer today and for the future of New Zealand’s long-over cervical cancer screening programme.

The cervical cancer rate has dropped in countries that have a programme of screening women by asymptomatic taking cervical smears, but in New Zealand which has no population screening programme, the number of cases has not declined. The rate of deaths from cervical cancer is gradually increasing, and some doctors talk about an altering “epidemic” of the cancer among younger women who rarely showed cancer in the past.

Many women in New Zealand do have cervical smears taken by general practitioners, family planning clinic doctors or during antenatal care, but the coverage is haphazard and the groups most at risk are the least likely to have regular smears. Of 42 cases of invasive cancer at Wellington Women’s Hospital in 1986, 16 had a previously abnormal smear which had been ignored. Others had been treated for gynaecological problems but had not been given a smear test, while several women had asked for an examination and been refused.

New Zealand lags behind the rest of the world in every area of the management of cervical cancer. Some of the country’s newer diagnostic laboratories still use outmoded Papimcsloup grading system which has been abandoned in more advanced parts of the world. The care of women with cervical abnormalities is haphazard and casual. Women are brought back endlessly for repeat smears when they should be referred for colposcopy. There are under 50 colposcopes in the country where there should be twice that number. Consequently, at Middlemore Hospital it’s “older” women are not referred for colposcopy after an abnormal smear but proceed straight to a "blind” cone biopsy, a practice frowned on by cancer experts. There are only two lasers, the treatment technique that is the least damaging in many cases.

National Women’s is the primary teaching hospital in gynaecology. It controls undergraduate training in gynaecology at the Auckland Medical School and is the home of the Post Graduate School of Obstetrics and Gynaecology where doctors are trained in the specialty.
Professor Green controlled the teaching on cervical cancer until he retired in 1985. In his view, “screening is the biggest hoax ever perpetrated on New Zealand women.” He thinks cervical smear tests for screening are a waste of time and money. He contends that more women will die from hysterectomies because of false negatives than if they had been left to die of cervical cancer.

The only way to prevent cervical cancer, he says, would be to stop “sterilisation.”

When we asked how he would detect CIS before it became invasive without screening, he replied: “You won’t. All you can do is reduce the effects of invasive cancer by early diagnosis.”

He emphasises the importance of history taking, taking women about any unusual bleeding or discharge which can be a sign of invasive cancer. These symptoms, however usually only appear once the cancer is invasive and the woman’s prognosis worse than if the cancer had been detected at an earlier stage.

Green believes there are “vested interests” in the current push to set up a nationwide screening programme for women. There are academic careers to be built, he maintains, and talks of the “colposcopists empire” — gynaecologists motivated by the prospect of a great increase in expansion colposcopic examinations.

This contention is contradicted by the fact that most colposcopists in New Zealand are in public hospitals where no private financial interests are involved. Twenty colposcopists hardly constitute an empire.

Green is undeniably that his views are regarded as isodysfunctional outside National Women’s Hospital.

Green’s successor as teacher and head of the cervical cancer team at National Women’s is Dr Murray Jamieson. The son of a non-conformist minister, Jamieson became a Rhodes Scholar before going on to become a surgeon at Waiariki after a stint in the territorials. Later he became Green’s registrar at National Women’s.

Jamieson is one of the new generation of “baby boom” doctors. Many believe that he is being groomed by Professor Bootham to be his replacement when he retires.

At his invitation we attended one of Jamieson’s lectures on cervical cancer. It was impeccable and taught the generally accepted position on cervical cancer screening. Jamieson said he had always taught this way. However, two years ago the head of one of the hospital’s other clinical teams was so disturbed at one of Jamieson’s lectures that he stood up and presented an alternative pre-screening view.

Like Professor Green, Jamieson prefers early diagnosis of invasive cancer to prevention by screen. There is an 80% cure rate for invasive cancer, he says, “a great deal higher than any other cancer”. The other way of looking at this, of course, is that at least one in five women with invasive cancer will die, women who might have been saved by earlier treatment.

In August 1985 Jamieson and Peter Miskin, a Hungarian working at the University of Dublin, published an article in The New Zealand Medical Journal entitled “Early by Women: A Commentary on Cervical Screening in which they quote classical and Biblical beliefs that sexual misconduct was the cause of genital cancer. They say...”: some southern authorities have provisioned New Zealand as an epidemic of that disease. Every woman should be screened. We are told that cervical cancer is a sexually transmitted disease. True, the victims are not eaten by women, but gauged away by cancer (or fear of it). The target of sex is a positive menace.

“In the 20 years from 1953 to 1983 no more than an average of 90 women a year have died of cervical cancer, compared with almost 2000 persons who died in 1982 from accidents, poisoning and drowning, or to the 34 suicides and 41 homicides in that year.”

The latter concludes that screening is therefore hardly worth the considerable effort involved. “Why then do we fuss so much about cervical cancer? Every woman should have cancer, correct? Every woman should be checked there is a danger? Why is it because the fear of being eaten by women is a healthy fear? Should we million New Zealand women over the age of 15 live in daily fear, though only 0.009% of them will have the final statistic? Listening to and asking leading questions of patients is not, far better than screening in the control of cervical cancer.”

Dr Jamieson says this letter is not evidence that he is opposed to screening. He dismissed it as a joke. Intended as a lampoon.

Professor Green describes himself and Jamieson as particularly “clove.”

Today Dr Gabriele Collison, National Women’s medical superintendent talks of “nursery camp” in the hospital, a “pub” and an “anti-screening camp.” Professor Green says he has group consists of the part-time clinicians, the anti-group of the professorial school.

However, Professor Bootham insists that doctors who see National Women’s as anti-screening have all been reading “bureaucratic from Stiegel” (sic) whose views he calls “false and libelous.”

Professor David Stiegel, an epidemiologist from Otago Medical School, has been one of a number of doctors not connected to National Women’s who have been trying to persuade medical opinion of the need for a screening programme. He is the author of the Stiegel Report. Published in The New Zealand Medical Journal in 1981 which revisited the evidence for the effectiveness of screening and provided a model for a possible programme in New Zealand.

While in many countries such a programme might not be necessary, says Stiegel, in New Zealand it was “because National Women’s Hospital, which is very influential, has seen about 15 years contained some people who have been very anti-cervical screening and I think it would be impossible to overestimate the effect that has had on medical training.”

Other New Zealand doctors talk about the National Women’s “party line.” Dr Ian St George, a lecturer in general practice at Otago Medical School, said that through National Women’s role in a teaching hospital Green’s theories have had a
"profound influence" both on practice and on the lack of screening in New Zealand. If doctors were to be educated about the value of screening, he says, it would be necessary to address the issue of Hertz Green and the influence his teaching has had in New Zealand, and show that it was wrong. There are still plenty of people who rationalise their lack of effort in taking cervical smear on that opinion.

Dr Allan Gray, medical director of the Cancer Society of New Zealand, felt it more strongly. "They are really up a gum tree. It's like belonging to a political party. The belief at National Women's is not attributable to this issue. It's a bigger issue. All the teaching at one medical school is totally out of date and incorrect. The results are a whole generation of doctors doing the wrong thing. A lot of practitioners won't do smears because they don't believe in them. They have been taught that it's useless."

It is clear, then, that National Women's Hospital is a crucial factor in the success of any nationwide cervical screening programme. But no one has prepared to directly conflict in public. Even doctors who want screening tried rather than confound the problem at National Women's Hospital.

The cervical cancer symposium held at Auckland Medical School in 1986 was organised specifically to convince the National Women's Hospital influence. "The Cancer Society," says Allan Gray, "paid for the two overseas speakers in the hope of bringing in a glimmer of light."

No one was prepared to publicly confront Professor Green about "the unfortunate experiment" at National Women's. He retired with his career intact. A edgery written by his colleague, Professor Liggins in the Auckland University News only praised Green. "His views which were condemned in the '60s as revolutionary and dangerous were largely vindicated in the '70s to the extent that as he retires he has the satisfaction of seeing worldwide acceptance of his conservative approach."

The silence stems from the medical profession's rigidly enforced loyalty among its members. Doubles, both doctors who did talk, were condemned by some of their brethren for breaking ranks.

Ruth's lawyer encountered that same silence when he tried to find a doctor who would testify to normal handling of a case like hers. He was refused by several doctors.

Professional solidarity is always a priority for the medical profession because it is basic to their power. There are many penalties for those who violate the code. Such doctors are marginalised and their careers stalled.

Covered by his medical insurance, Ruth's doctor only suffered a day's embarrassment for his life-threatening negligence. Had his crime been against the profession and not the patient, he might well have suffered a more severe outcome.

The sight of the doctor to treat his patient as he wishes is absolute. For over 20 years, no one interfered in Professor Green's treatment of patients. Eventually, new cases were referred to him, but no one intervened on behalf of the woman he was already handling. In the medical system, there is no voice for the public interest.

With no public scrutiny, regulation is supposed to come from peer review, that is, evaluation by others in the trade.

Some doctors say that such a situation as happened at National Women's could not recur because peer review is now so widely practised. "The bad old days of the consultant as a tyrant are gone," Dr Colston told us. Most hospitals now have ethics committees to monitor practices.

But ethics committees are inevitably dominated by doctors, and all members are appointed by the hospital with Hospital Board approval. They are not publicly elected. At National Women's Hospital, the ethics committee consists of doctors, one nursing and one lay member. It is chaired by Professor Broadbent. Although the committee was instated in 1977, it appears to have failed to investigate or definitively terminate the experiment begun in 1966.

Autonomy is crucial to the power of the profession. Doctors are fancifully proud of my encroachment on this autonomy. The profession is entirely self-regulating and beyond scrutiny. Doctors are accountable to no one but each other. To preserve this autonomy, the public must learn as little as possible about medical doing. Left to them the story of the "unfortunate experiment" would have been dealt with the victims.

This article was first published in Metro in June 1982.