

surgical treatment of those mammary cancers which overlie it. A more perfect technique will produce microscopical proof. Below is a short clinical report of the investigated cases:

CASE I.

At the extreme outer side of the left breast there is a very marked dimpling of the skin. Beneath and below this is a very hard, solid tumour with indefinite margins shading off into normal tissue, roughly the size of a plum. The nipple is not retracted, and the growth is not attached to the underlying fascia; one definitely enlarged hard axillary gland.

CASE II.

In March, 1907, a large, hard mass, the size of a Tangerine orange, had been excised from the lower and outer extremity of the left breast. In October, 1908, recurrence took place at the site of the scar in the shape of a mass, the size of a walnut, not attached to the skin or deep fascia. It lay external to the outer border of the pectoralis major. A chain of three very distinct hard enlarged axillary glands can be felt.

CASE III.

The left breast is the seat of a large, hard, prominent tumour, distorting and enlarging the organ, and occupying its whole area. The nipple is slightly depressed, and its summit is commencing to ulcerate, and there is very marked dimpling of the skin. The mass does not appear to be at all fixed to the deep fascia. Enlarged glands are present in the axilla.

CASE IV.

Beneath the left nipple and areola is a large, hard tumour of rounded outline and with well-defined margins, at least 2 in. in diameter, lying mainly towards the outer part of the breast. The nipple and areola are thickened, hard, and infiltrated by growth. The tumour is tacked on to the pectoral fascia and to the serratus fascia. One infected axillary gland is felt.

CASE V.

The right breast is much distorted by an indefinite hard sub-areolar growth, about 2 in. in diameter, which has caused deep and irregular dimpling of the skin and retraction of the nipple. The main part of the skin infection extends towards the outer edge of the breast beyond the edge of the pectoralis major. Below and external to the nipple is a small patch of cutaneous ulceration, secreting some thin serous fluid. There is very definite attachment of the tumour to the deep fascia, and one infected axillary gland can be felt.

CASE VI.

The left breast has been totally destroyed in its whole area by a large, offensive, fungating growth, 4 in. in diameter, definitely attached to the deep fascia. There is a mass of hard, enlarged axillary glands.

CASE VII.

The left breast is very large, prominent, and projected forwards by a large, very hard tumour the size and shape of a "halfpenny bun." The nipple is indrawn, and the skin of the areola is reddened, infiltrated, and fixed to the growth beneath. The tumour has a very definite edge and occupies practically the whole breast area, fully one-third of the mass lying on the serratus magnus. The growth is definitely tacked to the pectoral fascia, but this cannot be clearly demonstrated as regards the serratus fascia. Several hard, enlarged discrete glands are present in the axilla.

In this case, on examination of the specimen removed, an enlarged gland was found lying on the lower segment of the serratus magnus. I believe this gland is known to anatomists, but I have not previously identified it in the examination of a large number of breasts removed for cancer. Microscopically it was not infected by cancer cells, and no such infection could be demonstrated in the muscle underlying it.

CASE VIII.

At the outer extremity of the right breast is a hard mass the size of a goose-egg, adherent to the skin over it and causing retraction of the nipple. There is definite attachment of the tumour to the deep fascia beneath, and a mass of enlarged axillary glands.

This patient died a month after operation from pulmonary complications. At the *post-mortem* examination a piece of chest wall underlying the site of the tumour was excised for further examination. No cancer infection could be found in a large number of microscopic sections.

REFERENCES.

¹ Mitchell Banks Lecture, 1908. ² *Cancer of the Breast*.

CANCER IN NEW ZEALAND.

BY

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ALTHOUGH New Zealand has the lowest death-rate for the world, there is a persistent increase in the percentage of deaths from cancer.

In the year 1898 the deaths from cancer per 10,000 of living persons was 6.40, the percentage of total number of deaths due to cancer being 6.50. In 1907 the deaths from cancer per 10,000 of living persons was 7.33, the percentage of total number of deaths due to cancer was 6.70.

In the latter year, out of 10,066 deaths 674 cases were due to cancer, of which 361 were males and 313 females.

To show the increase in tabular form the following tables are taken from the report of the Public Health Department.

TABLE I.—Showing for each of the Ten Years 1898 to 1907 the Number of Persons Registered as having Died from Cancer, the Proportion of Deaths from Cancer per 10,000 Living, and the Percentage of all Deaths attributed to Cancer.

Year.	Estimated Mean Population.	Deaths from Cancer.	Total Deaths, all Causes.	Deaths from Cancer per 10,000 of Living Persons.	Percentage of Total Deaths due to Cancer.
1898	736,260	471	7,244	6.40	6.50
1899	749,984	468	7,680	6.24	6.09
1900	763,594	430	7,200	5.63	5.97
1901	777,968	515	7,634	6.62	6.75
1902	797,793	536	8,375	6.72	6.40
1903	820,217	582	8,528	7.10	6.82
1904	845,022	571	8,087	6.76	7.06
1905	870,000	566	8,061	6.51	7.02
1906	895,594	623	8,339	6.96	7.47
1907	919,105	674	10,066	7.33	6.70

The deaths from cancer in New Zealand and England are compared in Table II. The increase in the numbers for the sexes together for England and New Zealand is represented in the proportions below:

TABLE II.—Deaths from Cancer in every 10,000 Persons Living.

Year.	New Zealand.	England.	Year.	New Zealand.	England.
1881	2.69	5.20	1900	5.63	8.28
1886	3.68	5.90	1905	6.51	8.85
1891	4.68	6.92	1906	6.96	9.17
1896	5.50	7.64			

The relative percentage of deaths among males and females is shown by Table III.

TABLE III.—Deaths from Cancer in every 10,000 Persons of Each Sex Living in New Zealand.

Year.	Males.	Females.	Year.	Males.	Females.
1886	3.69	3.67	1903	7.51	6.63
1890	4.72	4.79	1904	7.23	6.23
1894	6.65	5.27	1905	6.79	6.18
1898	5.77	5.98	1906	7.10	6.79
1901	6.48	6.77	1907	7.41	7.25

To quote from the Departmental report:

The mortality was higher among the males than among the females (with the exception of 1890 and 1901), which is the reverse of English experience, where the rate was 7.94 per 10,000

of males and 10.32 of females for the year 1906. In the United Kingdom, however, the rate of increase is so much higher among males than with females that the Registrar-General calculates equilibrium will be reached in about the year 1932, and thereafter the rate among males would exceed the rate among females.

Table IV is drawn up to show the locality of the affected part.

TABLE IV.—Deaths from Cancer, 1903 to 1907, New Zealand. Showing the Number of Deaths of Males and Females from Cancer during the Years 1903 to 1907, classified according to the Part of the Body Affected.

Part Affected.	1903.		1904.		1905.		1906.		1907.	
	Number of Deaths.	Proportion of Specified.	Number of Deaths.	Proportion of Specified.	Number of Deaths.	Proportion of Specified.	Number of Deaths.	Proportion of Specified.	Number of Deaths.	Proportion of Specified.
Males.										
Mouth, lip, tongue, throat, neck, etc.	99	33.56	99	32.46	79	26.69	94	31.02	92	28.05
Stomach	96	32.54	107	35.08	107	36.15	104	34.33	98	29.88
Intestines, rectum	35	11.87	34	11.15	29	9.80	35	11.55	49	14.94
Liver... ..	35	11.87	42	13.77	49	16.55	44	14.52	58	17.68
Kidneys, bladder, urethra, etc. ...	17	5.76	13	4.26	25	8.45	18	5.94	17	5.18
Leg, foot, etc. ...	4	1.35	7	2.30	4	1.35	5	1.65	11	3.35
Lung... ..	9	3.05	3	0.98	3	1.01	3	0.99	3	0.92
	295	100.00	305	100.00	296	100.00	303	100.00	328	100.00
Not specified ...	30	—	18	—	17	—	34	—	33	—
Totals	325	—	323	—	313	—	337	—	361	—
Females.										
Mouth, tongue, throat, etc.	21	9.05	12	5.17	19	8.09	21	8.37	16	5.50
Breast	33	14.23	25	10.78	38	16.17	38	15.14	48	16.50
Stomach	51	21.98	55	23.71	51	21.70	42	16.73	47	16.15
Intestines, rectum	28	12.07	32	13.75	34	14.47	32	12.75	53	18.21
Kidneys, bladder	5	2.16	4	1.72	7	2.98	3	1.20	4	1.37
Ovary, uterus, vagina	48	20.69	58	25.00	49	20.85	68	27.09	73	25.09
Liver	38	16.38	35	15.09	27	11.49	42	16.73	39	13.40
Gall bladder, spleen, pancreas	4	1.72	1	0.43	4	1.70	5	1.99	6	2.06
Lung, spine, thigh, shoulder	4	1.72	10	4.31	6	2.55	—	—	5	1.72
	232	100.00	232	100.00	235	100.00	251	100.00	291	100.00
Not specified ...	25	—	16	—	18	—	35	—	22	—
Totals	257	—	248	—	253	—	286	—	313	—

By the last table it will be seen that the seat of cancer was:

In males:	
Stomach and intestinal canal ...	44.82 per cent.
Mouth, lips, throat, neck ...	28.05 "
Liver	17.68 "
	90.55 "
In females:	
Intestinal canal and stomach ...	34.36 per cent.
Gall bladder, spleen, pancreas ...	2.06 "
Mouth, tongue, throat ...	5.50 "
Liver	13.40 "
	55.32 "

Dr. Hislop has collected 31 cases of cancer which have occurred in one district in which he practises, and notes the fact that a large proportion of the patients were living in the neighbourhood of a certain water supply.

TABLE V.—List of Cases of Cancer (Dr. Hislop).

No. and Sex.	Age.	Seat of Disease.	No. and Sex.	Age.	Seat of Disease.
1. M.	55	Cancer of bowel.	16. M.	70	Rectum.
2. M.	65	Cancer of bowel.	17. F.	65	Breasts.
3. M.	56	Cancer of bowel.	18. M.	57	Bowel.
4. F.	55	Cancer of bowel.	19. M.	70	Stomach.
5. M.	65	Cancer of liver.	20. F.	57	Breasts.
6. M.	65	Mouth and throat.	21. F.	51	Breasts.
7. M.	45	Stomach.	22. F.	46	Liver.
8. M.	86	Stomach.	23. F.	62	Uterus.
9. F.	—	Bowel.	24. M.	72	Bowel.
10. M.	—	Bowel.	25. M.	56	Bowel.
11. F.	36	Breast.	26. M.	57	Liver.
12. F.	51	Caecum.	27. F.	39	Liver.
13. M.	48	Lip; epithelioma removed before cancer developed properly.*	28. F.	70	Liver.
			29. F.	53	Pancreas.
14. M.	70	Lip; later bladder and rectum.	30. M.	43	Rectum.
15. F.	46	Breasts first; liver later.	31. F.	70	Breast.

* Government pathologist's report.

From this list it will be seen that the alimentary tract was the seat of the invasion in the great majority of the cases.

In the male sex no fewer than 16 of the cases were in this locality; 11 occurred in the bowel, the exact situation in many cases being the caecum, splenic flexure, and descending colon, 3 were gastric, and 2 were rectal in origin. In the females, out of 14 cases, 6 were disease in the breast, 1 in the uterus, 3 in the bowel, 3 in the liver, and 1 in the pancreas.

The number of cases in which the alimentary canal was affected seemed to point to some exciting cause common to all the patients. To classify these as much as possible with reference to the district and houses in which they lived the accompanying map has been prepared.

It will be noticed that many of the cases occurred within a particular area. Dr. Hislop describes the nature of this area as follows:

Between a large snow-fed river and a smaller stream lies a flat tract of country extending in length for about ten miles to the foot of a hill, 5,600 ft. in height, the base of which was formerly, and is still to some extent, covered with dense native bush.

The breadth of the area varies, being about six miles across on the average. The lie of the land sinks slightly towards the middle, and then gradually rises towards the base of the hill, in which there are many gullies still showing native bush.

Originally this land was covered with tussock—the native grass—and in the more swampy parts with native flax and “nigger heads.” Here in many places it was difficult or impossible to cross. The soil varies in many places from a light shingly nature to a stiff clay which holds the moisture and bakes in hot weather.

The nature of this country has now entirely changed, the land being now subdivided into farms, and ploughed; cereals and turnips being chiefly grown. Many belts of *Pinus insignis* and blue gums have been planted round the homesteads, and along the creeks willow trees have been planted.

The reason for referring to this district in its earlier state is because many of the cases lived in this country during its transition period, and several of them worked and assisted to bring the land under cultivation.

Creek.

Arising in the heart of the bush is a creek which winds through the country at a sluggish pace. In many places it is confined within well-defined banks, in others it spreads widely over the land, and irrigates the surrounding district in times of flood. After flowing for some five miles it is joined by another creek of much the same nature, which rises in the wooded gullies in the hills. Four miles lower down a third creek joins the main stream. This last creek rises from some springs which are situated in some land that was a swamp in the pre-cultivation days. It is in this district, and especially along the line of the creek, that most of the cases have occurred.

Rainfall.

The average rainfall for the year in this area is over 45 in. The altitude of the land is 600 ft. above sea level. The temperature ranges are never very severe, although frosts are keenly felt owing to the flat nature of the ground holding the subsoil water. Any snow that falls tends to lie for some considerable time. In summer the maximum temperature rarely exceeds 90°, and this occurs only in hot, dry seasons. At a station four miles away, across the river and at a higher altitude, the rainfall is as follows:

TABLE VI.—Rainfall at the Gorge, New Zealand. Altitude of 800 feet above sea level.

	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Jan. ...	4.18	3.50	6.20	3.78	4.79	4.26	6.68	4.81	3.05	2.18
Feb. ...	5.43	2.62	5.13	6.35	4.21	6.97	5.76	5.61	7.03	1.33
March ...	8.62	3.17	4.70	14.77	2.51	8.69	1.76	3.47	5.94	7.67
April ...	5.66	5.41	2.25	5.97	1.26	2.56	2.19	4.33	2.56	3.55
May ...	3.89	2.29	1.94	2.52	3.24	3.44	3.05	2.19	2.39	3.38
June ...	0.76	1.00	2.16	4.70	1.54	3.52	5.13	3.96	1.39	
July ...	4.94	2.98	2.32	0.88	0.83	1.11	1.33	3.66	1.54	
Aug. ...	1.26	2.48	1.88	0.89	2.23	1.95	2.33	2.00	5.84	
Sept. ...	3.13	5.52	2.17	2.89	3.39	1.25	2.35	2.01	5.48	
Oct. ...	0.98	13.12	2.08	3.05	2.12	8.87	5.81	0.66	2.89	
Nov. ...	4.12	3.92	4.35	3.81	4.81	2.27	1.71	4.17	3.67	
Dec. ...	4.30	3.17	9.33	7.52	2.79	5.37	4.81	1.59	1.47	
Totals ...	47.26	49.13	46.62	57.14	38.00	55.11	54.54	38.94	43.15	

On the accompanying map the position of the creek has been shown. The numbers refer to the places where the patients lived.

Many of the patients inhabited the same house for a longer or shorter period, and although none died in this house, and several lived for some years after leaving the house, still they were all working in some part of the district or close to it up to the time of their death.

Cases 1, 2, 3, 4, 5, and 6 all lived in the same house, and although some kept in good health some years after leaving it, they all connected in their minds the district as the cause of their illness. The cottage in which these patients lived was simply a wooden structure built after the usual style of New Zealand houses, and was used as a shepherd's home for the sheep station on which it was situated. Of

these six cases, five died either in or close to the district, the sixth dying at a distance. Case 7 worked for many years ploughing and contracting in the district, finally dying of cancer of the stomach at his own farm 7 miles distant.

Cases 8 and 9 (cancer of the bowel) lived at a hamlet a few miles distant, the house being situated on the banks of a branch of the notorious creek, and lying at the foot of the hills with some native bush in the vicinity.

Cases 10, 11, 12, and 13 all lived in the township, which is situated on the main branch of the creek, and lies at the foot of the high hills in the native bush.

Case 14, epithelioma of lip, removed three times, the last operation being twenty years ago, has recently died of cancer of the bladder and rectum. He lived on another branch of the creek, but worked in all parts of the district for at least thirty years.

Case 15 lived in the same house as Case 14 until her marriage. Case 16 lived just across the smaller river, the house being

situated in a hollow with thick native bush growing round it, and having a small stream running past the dwelling.

Case 17 lived for some years in the vicinity, her house being placed at the foot of the hills and surrounded by bush, a small stream passing the house.

Case 18 lived within a few miles; the house was under the hill, and a bush creek ran close to it.

Case 19 lived in the same house as Case 17 for many years.

Cases 20, 21, 22, 23, all lived at a small township three miles from the base of the hills, and formerly surrounded by bush.

Case 24 lived on the same side of the larger river, but some miles distant. His house was placed in a hollow, and the water supply was derived from a creek which rose in a swamp behind the house.

Cases 25 to 30 died in a township ten miles from the foot of the hills. Originally there was a good deal of native bush above the town, and also swampy ground covered with native flax. It was drained by several creeks.

The home of Case 31 was on the banks of one of these creeks. This area has now quite changed, the flax being cut down and the land better drained.

Occupations of the Patients.

All the patients apparently led what one would consider to be essentially healthy lives. The only one who lived an indoor life was Case 30, but even he spent much of his time in the open air.

Cases 1, 2, 3, 5, 6 were shepherds, agricultural labourers, or farmers.

Cases 7 and 15 were agricultural contractors.

Case 10 was a blacksmith.

Cases 11 and 12 were housewives.

Cases 15, 17, 20, 21, 22, 23, 29, 4, 9, and 28 (females) were engaged in ordinary household duties, and spent a good proportion of their time out of doors.

Cases 16, 19, 24 were run-holders.

Case 30 was a draper.

Relationships of the Patients.

In order to eliminate as far as possible any hereditary tendency to the disease, it is only right to consider any relationship existing among the patients.

Case 14 was the father of Case 15.

Case 7 was the husband of Case 15.

Case 6 was the son of Case 8.

Case 28 was the mother-in-law of Case 29.

Case 31 was the aunt of Case 15.

Thus the Cases 6, 8, 15, and 31 were the only ones where a strain of heredity could be detected.

History of Definite Injury.

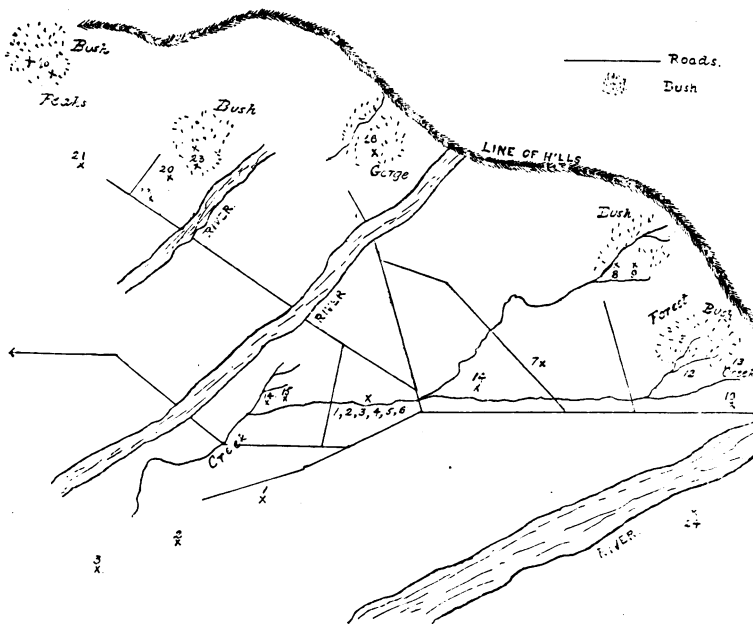
In many of these cases a definite history of injury or of some long-standing irritation was obtained, these causes being always present in the patients' mind as the cause of their disease.

The following are instances in point:

In Case 7, cancer of the stomach, the onset of the disease was attributed to a horse falling upon him and injuring him in the region of the stomach. This accident, however, occurred some five years before the nature of his disease was diagnosed; the man was going about his usual work, and only occasionally feeling any pain, although he suffered greatly from dyspepsia.

Case 15. Cancer of the breast. This woman was the wife of the last-mentioned case (7). She developed cancer within a year of her husband's death, and at first sight one was inclined to attribute the disease to direct contact, but inquiry proved that she had sustained a severe blow on her breast from a kick by a sheep at least three years before the onset of the disease.

Case 24. Cancer of the bowel affecting the splenic flexure. Ten years before he had injured his left side while moving sheep; the side had always felt weak since.



Case 14. Epithelioma of lip. The usual history of constant smoking, the pipe being held on one side of the mouth. The growth was removed three times with many years between the operations, the lip finally remaining clear for twenty years, when he was attacked with bladder symptoms and a walnut-sized tumour was removed by one of us. Several months later the rectum became involved.

Case 13. Epithelioma (doubtful). The trouble originated from the habit of continuously holding nails between the lips while at work, these acting as a chronic irritant.

Case 30. Cancer of the rectum. This patient suffered for long with piles, which were irritated by bicycling and riding.

Case 8. Cancer of bowel. A history of injury to the side while wrestling was given; the side had felt weak all his life.

Case 16. Cancer of rectum. A long history of piles was given.

Habits of the Patients.

All the cases affected led healthy lives, much of the time being spent in the open air. With regard to their diet, they were all hearty, some of them very large eaters of meat. They all drank tea with all their meals, and frequently between meals. The tea is taken very strong, and often drunk out of tin pannikins in which it has stood for a considerable time. As a general rule, tea was taken with meat at least three times a day.

Case 1. Drank tea to excess; also a good quantity of alcohol; and later drank "pain-killer."

Case 2. Excessive tea-drinker and smoker.

Case 6. Heavy smoker and drinker.

Case 8. Excessive tea-drinker.

Case 10. Excessive tea-drinker; also took alcohol.

Case 11. Much tea and alcohol.

Case 16. Excessive tea-drinker.

Cases 5, 24, 29, 30. Took tea in excess.

Many of the other cases indulged very freely in tea, but the 11 cases quoted above may be said to have been immoderate in their indulgence in tea.

It may be noted that out of 11 female cases only 2 were stated to be excessive tea-drinkers, proving that in this country over-indulgence in tea is commoner in males than in females. This bears out the experience of many practitioners who live in country districts.

No actual malaria is endemic in this particular district, but many of these patients suffered from subacute and chronic rheumatism, especially those who worked on the ground before it was drained. It is difficult to obtain exact statistics of the prevalence of cancer in New Zealand with reference to the respective districts in which the disease first was diagnosed. The four large centres, Dunedin, Christchurch, Wellington, and Auckland, naturally show the greatest number of cases. To these centres patients come for treatment from the country districts. On the West Coast of New Zealand, where the rainfall is very large, we have been only able to gather statistics from one or two practitioners.

Dr. Brittin, who practised at Ross, on the west coast, kindly searched all his notebooks and death certificates for cancer cases. He writes to us that during three years' practice on the coast he had 35 deaths; 20 of these were under 9 years of age. Of the remaining 15 which occurred between the ages of 10 and 78 years, 5 were due to cancer—4 males, aged 53, 53, 59, and 63 respectively, and 1 female, aged 62; 4 of these were cancer of liver or stomach, and 1 a cancer of the orbit. He says: "In three years' practice on the coast I had 5 deaths from cancer out of 15 adult deaths. In 10 years' practice in Papanui (east coast) I had 1 death from cancer out of 70 from other causes. On the west coast in the mining townships and camps the diet was 'frying-pan meat and billy tea.' The tea leaves were emptied out of the 'billy' once a week, and the billys always showed signs of corrosion. The water contained iron and tannin from the decomposing vegetable matter in all the bush streams. The whole district was bush, and my patients lived in small huts. Chronic rheumatism was universal."

Alfred Haviland, in his article on medical geography, points out the highest mortality of cancer is found around the lower courses of fully-formed rivers that seasonally flood their riparian districts; the lowest cancer mortality is found on the most elevated tracts of country, and correspond to the area of older rocks, the highest mortality groups being coincident with the more recent geological formations, especially the clays and the still more recent alluvial soils. This theory is certainly borne out by the collection of cases recorded by Dr. Brittin and Dr. Hislop.

Cancer Houses.

D'Arcy Power gives a number of instances where several persons living in the same house have developed cancer. Thus, in a brick house on land formerly pasture land, three cases following each other died of cancer. Several other instances are recorded. In some, however, the patients were related.

Cases 1 to 6 all lived at some time in the same house, and under the same conditions, although none of them happened to die in this house.

The neighbourhood of the native bush and bush streams seem to have some distinct connexion in the origin of the disease. Malaria may not be an antagonist to cancer, but it is significant that where malaria is common cancer appears to be rare. It may not be improbable that there is some malarial poison antagonistic to the growth of cancer cells.

So many of the cases were rheumatic, and rheumatism is so prevalent in subacute or chronic forms in bush districts, that we can hardly ascribe the coincidence of rheumatism and cancer to an accident. It is not impossible to imagine that the circulation of the blood in rheumatic cases may act as a direct irritant to the tissues.

So many cases of cancer appear to follow a definite injury that one is obliged to believe in a direct connexion between traumatism and cancerous invasion—epithelioma of the lip, so rare in non-smoking females; cancer following gall stones; the Kaigu burn disease, so frequently seen in Kashmir; cancer of the scrotum in sweeps, now rarely seen since the modern chimney has altered the conditions of chimney cleaning—all point to irritation as localizing agent for cancerous invasion.

Out of 201 cases of cancer of the penis, Captain Whitlock, R.A.M.C., observed that they all occurred in Hindus who were uncircumcised, and none in Mohammedans who were circumcised. Sarcomata affecting the lower extremity is more common in Hindus, who go barefooted, than in Mohammedans, who wear shoes.

Against the irritation theory, it has been said that cancer of the penis occurs not in stallions, as one might expect from the irritation of coition, but in geldings; this, we believe, is due to the irritation of the dirt within the sheath, for a well-known horse dealer has informed us that by daily cleansing the inside of the sheath he can improve the health of a gelding immensely, and add to its market value considerably.

The cases of cancer admitted to the hospitals, being drawn from all over the district, do not give any information of interest, but in the last fifteen years we have been struck by the fact that carcinoma is appearing at an earlier age than formerly. It is very little comfort to console ourselves that it is due to a more careful or more accurate diagnosis that cases are detected earlier. The fact is, they do seek advice at an earlier age.

RODENT ULCER TREATED BY POTASSIUM BICHROMATE.

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THE case under consideration was a woman of 82 years of age. When she came under my care at Ayr District Asylum she had a history of having had a "sore of the nose" for two years. On examination the condition was found to be typical of rodent ulcer. Vertically the ulcer extended from the nasion above to the inferior border of the nasal bones below. Laterally it approached to within $\frac{1}{4}$ in. of the inner canthus of the left eye, and to within $\frac{3}{8}$ in. of the inner canthus of the right eye, and covered most of the bony skeleton of the nose. It presented a well-defined "rolled" irregular border, with an ulcerated centre showing no granulations. The patient felt no pain, but complained of great itching, and in consequence she was continually picking at the ulcer.

On account of the extent and position of the ulcer, it was thought impracticable to employ surgical means for its removal. The use of potassium bichromate was suggested by the paper of Dr. James Fenwick.¹ A 10 per cent. aqueous solution of the bichromate was painted on the surface of the ulcer night and morning for a few days,