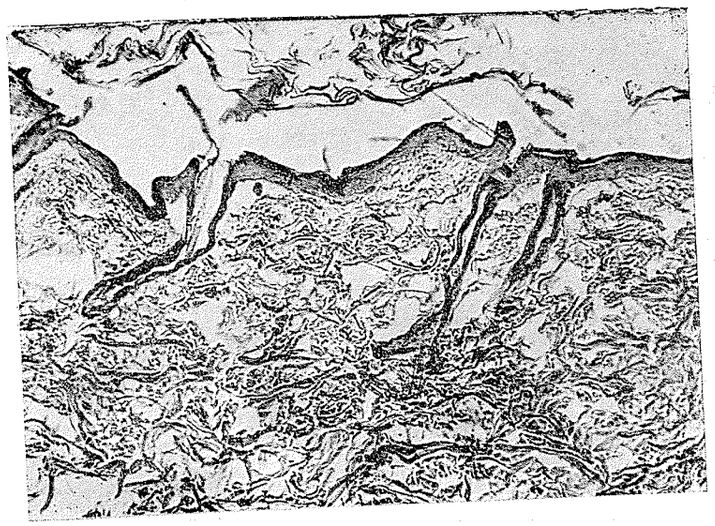

Fig. 9

ACTA MEDICA IRANICA
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CANCER SITUATION IN IRAN

A SURVEY OF THE MOST FREQUENT FORMS AND SITES AND THE COMPARISON OF THE PREVALENCE WITH SOME OTHER STATISTICS

A. Habibi, M. D. ✡

Cancer survey, if it is considered as based on histological diagnosis of this disease, is not very long-standing in Iran.

The first pathology laboratory was created by Ministry of Public Health in 1937 in Tehran. In 1939 it was transfered, toghether with the hospitals of the Ministry of Public Health, to the Tehran Medical School.

This Laboratory was splendidly developed by the lamented Professor MOSTAPHA HABIBI, who made it into a first class centre.

It was only later, some time after the foundation of this laboratory, that certain Health Organizations devoted themselves especially to the case finding, diagnosis and treatment of cancerous patients in Tehran and the Cancer Institute was created.

The first step in controlling cancer is to have a complete and accurate knowledge of its occurrence, the most common forms, and the various factors which are conducive to their formation.

In countries like Iran where, as yet, there is no cancer control programme, the carrying out of the above preliminary steps is subject to two main limitations :

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Firstly in Iran we still do not have an accurate knowledge of the prevalence of cancer. Not many patients refer to cancer specialists, nor to the hospitals exclusively established for this disease, and we still do not have a board assigned to the gathering of statistics and information which would enable the physicians to submit their findings concerning their cancerous patients. For this reason, we are far from being in possession of accurate statistics showing the percentage of the population suffering from cancer or the number of new cases per year.

Secondly, we still do not know the number of people who die from this disease each year, and it is not possible to obtain an accurate picture from the statistics of the Mortality Department of Tehran. A number of cancerous patients die from a secondary disease developed after the onset of cancer, and usually it is this secondary disease which is often recorded. In addition, a large number of deaths are recorded as due to senility or unknown causes, where, in fact a certain number of these may be due to cancer. For example, the Ministry of Health's published statistics for 1955, showed that in the Tehran area the mortality rate due to cancer occupied the eighth place at a rate of 3.6% of the total deaths recorded. This is considerably lower than the statistics given for other countries, which are between 15 and 25%. This discrepacy can be explained by considering the following figures also given in the above 1955 publication. From 14,547 persons who died, 3,958 were without diagnosis, and deaths were attributed to senility. This figure comprises almost one quarter of the deaths of that year, and we can say with certainty that a number of these were old people who died from cancer, but whose deaths were never recorded as such. 1955 is by no means an exception in this respect, and a ten year's survey, carried out by the Tehran Municipal Health Department, showed the same discrepancy. In conclusion it can be said that not even in Tehran is it possible to obtain accurate statistics of mortality figures due to cancer.

In view of the above limitations, the only statistics which can be compiled are the findings of the Pathological laboratories which diagnose the disease. These findings indicate the relative rates and proportions of the various forms of cancer but do not, however, allow an accurate opinion regarding the prevalence of cancer in Iran, as the figures apply to the number of patients which refer to the laboratories, and not the total number suffering from the disease. There are also a number of

patients who are operated upon without having been checked by laboratory examinations, and a number, the nature of whose disease has been left unascertained either by incomplete medical examinations or due to indifference on the patients themselves.

SOME BRIEF INFORMATION REGARDING GEOGRAPHIC AND DEMOGRAPHIC SITUATION OF IRAN

Iran is situated between latiude 25° and 34°45 North and between longitude 44° and 63°30 east with a population of 18,944,821 (1956 census) and an area of 628,000 Sq. miles. The climate is very dry in most part of the country, and with a hot summer and cold winter.

Tehran, the capital of Iran, is situated at 66 miles of the Caspian sea and at the foot of Elbruz montain with a population of 1,797,429.

In spite of an altitude of 3,800 feet, Tehran has a rather long and hot summer and a cold winter. On the whole this city enjoys of a bright sunshine during the different seasons.

Concerning the demographic situation we show, in the following tables, some informations obtained by the general census of 1956.

TABLE No. 1
Distribution of the Population in Tehran

LOCALITY	POPULATION	Men	Women	Average of the Age	Low Socio-Economic Class	Married People
		Number	Number			
Tehran (City)	1,512,082	799,360	712,722	21,7	53.5%	62.4%
Tehran (Suburb)	285,347	151,807	133,540	20	53.1%	79.6%
TOTAL	1,797,429	951,167	846,262	21.4	53.5%	63.5%

The above results show a predominance of the male to the female sex (112/100) and an average of the age of 21.4 years. More than the half of the population belong to the low socio-economic class.

The age group distribution obtained by the same census in 1956 is shown in the following table.

TABLE No. 2

Age Group Distribution in Tehran Population

Age Group	Male %	Female %	Total %
0 to 1 year	5.32	5.24	5.28
1 » 4 years	10.89	10.20	10.54
5 » 9 »	13.04	11.73	12.36
10 » 14 »	8.71	8.53	8.62
15 » 19 »	17.42	17.06	17.24
20 » 24 »	7.56	7.19	7.38
25 » 34 »	13.11	12.23	12.67
35 » 44 »	10.24	11.11	10.64
45 » 54 »	7.16	8.61	7.88
55 and +	6.55	8.10	7.39

The above data show a predominace of the young group (especially between 15 and 19 years) and small proportions of the group aged more than 55 years.

In conclusion we find that the demographic data obtained on Tehran population is rather different than the results found in most of the European and American countries. Could these different factors have any repercussion on cancer epidemiology in Iran?

The Sources of Statistics

In this survey we have gathered figures from the files of different laboratories, as follows:

1) Pathology Department of the Tehran Medical School (Director K. ARMINE, M. D.) which carries out each year about 3,000 tissue examinations on the patients of Teaching Hospitals, (Public Hospitals) and a certain number of specimens sent to it from Hospitals in the provinces. The figures used in this survey are for the years 1951 to 1960.

2) Pathological Laboratory of Tehran's Cancer Institute (Director H. RAHMATIAN, M. D.) which has been operating since 1956. The figures from this laboratory are for the years 1956-1958.

3) The Patients who have been referred to our private laboratory by different surgeons or specialists practising in private clinics in Tehran, from 1948 to 1960, and whose disease has been ascertained by us as cancer.

Generally speaking, it should be stated that the figures compiled in this study have been derived from two groups of patients, one being Public Hospitals Patients, and the other from patients of private clinics. As the Public Hospitals, which are free of charges, usually accept the lower class people, and the higher class patients refer to private phyisicians in special clinics, we can conclude that the figures compiled comprise almost all classes of people of different age groups, suffering from all kinds of cancers, and can be said to be representative of the proportion of different cancers observed in Iran.

The Method of Compiling Statistics

The compiling of statistics on cancer has been carried out in co-operation with a special department which exists for this purpose in the "Institut National d'Hyghiène de Paris". This Institute has undertaken to compile sanitary statistics in most of the Near Eastern countries *.

It was in view of this that we handed over to them the results of our cancer case gatherings for use in their sanitary statistics. At the same time this provided us with an opportunity to classify our patients correctly, by I. B. M. machines on the basis of international recognised techniques.

The method used in classification of the different types of cancers is designed by the World Health Organisation in 1955, and since it is a scientific and International method, it makes the compiled statistics comparable with the statistics gathered and published in other parts of the world.

* I have to thank Mrs. C. LAURENT, of the "Institut National d'Hygiène", for her kind collaboration in this part of our survey.

The Analysis of Statistics

The Statistics presented in this report are based upon the results of 36,224 pathological examinations, out of which 10,000 cases of cancer have been diagnosed. Out of this number, 1,850 cases deal with private laboratories, 2,471 cases, with patients referring to the Cancer Institute, and the rest, 5,679 cases, with patients who have been examined in the Pathological laboratory of the Medical School.

Table No 3 shows, separately, the unumber of histological examinations, the number of cancer cases diagnosed, and the ratio of the positive results to the number of histological examinations from all three different sources.

TABLE No. 3

CANCER CASES TO HISTOLOGICAL EXAMINATIONS RATIO

SOURCES OF PATIENTS	TOTAL NUMBER OF HIST. EXAM.	NUMBER OF POSITIVE RESULTS	RATIO OF CANCER ON HIST. EXAM.
PRIVATE PHYSICIANS	7,100	1,850	26.0%
CANCER INSTITUTE	7,624	2,741	32.5%
HOSPITALS	21,500	5,679	26.4%
TOTAL :	36,224	10,000	28,3%

The above figures show that of those patients examined for cancer, 28.3% showed positive results. The percentages obtained from our own private laboratory, and those of the Pathological Laboratory of the Medical School, stand quite comparable. While most of the patients referring to the Cancer Institute are suffering from various kinds of tumors, nevertheless, the ratio of cancer to the number of histological examinations carried out in the laboratory of the Institute, is not more than 6% of the two above-mentioned laboratories.

These ratios fluctuate in different years, the ratio being 21-32% among the private patients, and from 24-30% among the hospital patients, including the Cancer Institute. In general, these changes show no kind of order, thus rendering it impossible to state whether cancer among our patients is increasing or decreasing.

Concerning the sex ratio in general statistic, amongst these 10,000 cancerous patients, 5523 patients relate to men, and 4477 relate to women, that is to say the sex ratio is about 1,2 men for one woman.

Relative Occurence of Cancer in the Various Parts of the Body

All the 10,000 cancerous cases, in men and women, are shown separately in Table 4, on the basis of the international classification of the World Health Organisation, in relation to the localities from which tissues have been removed. In this classification, in so far as it has been possible, we have relied upon the case histories of the patients collected by the laboratories, and in most cases the precise locality of tumors have also been determined. Nevertheless, when, in rare cases, the precise locality of biopsise has not been known, these have been mentioned in a generalized classification. For exemple, in case of cancers of the lips, mouth, tongue and salivary glands, the tumor of each organ has been mentioned separately, but in cases where the exact location of tumor of the mouth has not been determined, these cases have been mentioned under the heading of "Cancer of other parts of the Mouth" (Code number 144)

In addition, in certain circumstances we have encountered cases where there has been no information concerning the location of the tissue. Unfortunately there was no way of contacting the physician concerned in order to complete our knowledge of the case, and the microscopic examination of the cancerous tissues could not help to determine its origin. However, the malignancy of the tissue was certain (out of 10,000 cancer cases, 327 proved to belong to this category), therefore we had to mention such cases under the title of "Cancers of Unspecified Sites" (Code number 199)

TABLE No. 4

Cancer in Iran

Distribution by Sex and Site

On 10,000 cases diagnosed from 1948 to 1960
in Tehran Pathology Laboratories

SITE	MEN		WOMEN		TOTAL	
	No.	%	No.	%	No.	%
140_Malignant neop. of lip	208	3.76	47	1.04	255	2.55
141_Malignant neop. of tongue	84	1.52	54	1.20	138	1.38
142_Malignant neop. of salivary gland	67	1.20	41	0.91	108	1.08
143_Malignant neop. of floor of mouth	10	0.20	5	0.10	15	0.15
144_Malignant neop. of other parts of mouth, and of mouth unsp.	111	2.00	54	1.20	165	1.65
145_Malignant neop. of oral mesopharynx	74	1.34	33	0.73	107	1.07
146_Malignant neop. of nasopharynx	46	0.83	23	0.51	69	0.69
147_Malignant neop. of hypopharynx	10	0.20	3	0.07	13	0.13
148_Malignant neop. of pharynx unsp.	52	0.96	13	0.30	65	0.65
150_Malignant neop. Esophagus	186	3.36	120	2.68	306	3.06
151_Malignant neop. of stomach	194	3.55	62	1.45	256	2.56
152_Malignant neop. of small intestine, including duodenum	10	0.20	14	0.30	24	0.24
153_Malignant neop. of large intestine except rectum	77	1,40	46	1.02	123	1.23
154_Malignant neop. of rectum	116	2.10	80	1.85	196	1.96
155_Malignant neop. of biliary passages and of liver	58	1.05	32	0.70	90	0.90
156_Malignant neop. of liver (secondary)	42	0.77	28	0.64	70	0.70
157_Malignant neop. of pancreas	15	0.28	6	0.12	21	0.21
158_Malignant neop. of peritoneus	21	0.41	18	0.36	39	0.39
159_Malignant neop. of unsp. digestive organs	34	0.68	28	0.64	62	0.62
160_Malignant neop. of nose, nasal cavities, middle ear, and accessary sinuses	64	1.18	26	0.60	90	0.90
161_Malignant neop. of larynx	327	5.90	79	1.80	406	4.06
162_Malignant neop. of bronchus and trachea, and of lung specified as primary	271	4.90	77	1.70	348	3.48
163_Malignant neop. of lung, unsp. as to whether primary or secondary	12	0.21	1	0,02	13	0.13
164_Malignant neop. of mediastin	2	0.04	1	0,02	3	0,03
165_Malignant neop. of thoracic organs	1	0.02	1	0.02	2	0.02
170_Malignant neop. of breast	36	0.65	603	13.40	639	6.39
171_Malignant neop. of cervix uteri	—	—	988	22.00	988	9.88
172_Malignant neop. of corpus uteri	—	—	54	1.20	54	0.54
173_Malignant neop. of other parts of uterus	—	—	10	0.20	10	0.10
174-Malignant neop. of uterus, unspecified site	—	—	181	4.04	181	1.81
175_Malignant neop. of ovary	—	—	189	4.22	189	1.89
176_Malignant neop. of other and unsp. female genital organs	—	—	60	1.35	60	0.60
177_Malignant neop. of prostate	21	0.38	—	—	21	0.21
178_Malignant neop. of testis	131	2.40	—	—	131	1.31

SITE	MEN		WOMEN		TOTAL	
	No.	%	No.	%	No.	%
179_Malignant neop. of other and unspecified male genital organs	18	0.33	—	—	18	0.18
180_Malignant neop. of kidney	48	0.90	22	0.50	70	0,70
181_Malignant neop. of bladder and other urinary organs	147	2.70	32	0.70	179	1.79
191_Malignant neop. of skin	1.445	26.15	714	15,95	2.159	21,59
192_Malignant neop. of eye	48	0.90	33	0.72	81	0.81
193_Malignant neop. of brain and other parts of nervous system	160	2.90	73	1,63	233	2.33
194_Malignant neop. of thyroid glands	54	0.96	72	1.60	126	1.26
195_Malignant neop. of other endocrine glands	9	0.16	6	0.12	15	0.15
196_Malignant neop. of bone	53	0.95	36	0.78	89	0.89
197_Malignant neop. of connective tissue	150	2.73	89	2.00	239	2,39
198_Secondary and unspecified malignant neop. of lymph node	210	3.80	122	2.70	332	3.32
199_Malignant neop. of other and unsp. site	240	4.36	87	1.96	327	3.27
206_Malignant neop. of lymphatic system	639	11.58	207	4.63	846	8.46
207_Malignant neop. of haematopoietic system	22	0.40	7	0.14	29	0.29
All Sites	5523	100%	4477	100%	10,000	100%

In order to compare cancer of the different organs of the body we have compared the most common types with each other, and they are shown in Table No. 5. As seen from the table, the most common type of cancer, both in men and women, are the malignant tumors of the skin which account for 21.59% of the total cases. Cancer of the cervix uteri takes second place accounting for 9.88%. The primary cancers of the lymph nods take third place (8.46%) and cancer of the breast ranks forth, accounting for 6.36% of the cases in both sexes. Cancer of the larynx and lung takes fifth and sixth place respectively, accounting for 4.06%, and 3,48% of all cancerous patients. 3.32% of the patients suffering from the lymph nods tumors showed a secondary cancer of these nods. Cancer of the oesophagus, of stomach and lips hold eighth, ninth and tenth places respectively. Cancer of connective tissue was found in 2.39% of cases, and the malignant tumors of the nervous system, either that of the centers or peripheral nerves, comprise 2.33%. Cancer of the rectum forms 1.96% of our cancerous patients. Cancer of ovary, cancer of other parts of the uterus and cancer of the bladder, form 1.59% and 1.76% respectively of all the cases. Cancer of the unidentified parts of the mouth, and cancer of the tongue have been found in 1.65%, and 1.38% of the cancerous cases in our study. Cancer of the testicle, which holds the 19th place, has been found in 1.31% of all the cancerous figures. Cancer of the thyroïd glands takes 20th place, and cancer of the large intestine (excluding rectum) ranks 21st accounting respectively for 1.26% of our cancerous patients.

The salivary glands and the mesopharynx cancers occupy the 22d. and 23d, place with a prevalene of 1,08 and 1,07% of all cancers in both sexes. The nose, nasal cavity and middle ear cancers are seen in same proportion than the biliary passage and liver cancers which occupy the 24th. and 25th. place with 0,90% of all cancerous patients. The bone cancers with 0,89% and the eye cancers with 0,81% hold the 26the and 27th. place in our statistics.

The secondary liver cancers and the kidney cancers are seen in same propotrion, 0,70%, and occupy the 28th. and 29th. place and the neoplasm of nasopharynx which exist almost in the same proportion (0,69%) hold the 30th. place in our general statistics.

Uterus body neoplasms: 0.54%, cancers of peritoneum: 0,39%, hematopoietics organs cancers: 0,29%, neoplasms of small intestins: 0,24% cancers of the pancreas: 0,21%, prostatic cancers: 0,21% secondary lung

cancers : 0,13%, the neoplasms of the mediastin : 0,03 and the thoracic organs cancers : 0,02% of all cancerous patients.

The unspecified malignant neoplasms of different organs are shown only in the table No. 4.

Concerning the other rare cancer cases observed in our survey the percentages are given in the general distribution table (Table No. 4).

Study and Discussion on the Most Frequent Types of Cancers

After the general view on cancer situation in Iran, we present in the following chapters, in detail, the most common type of cancers observed in our survey. In this study we try to show some important questions such as : the distribution and the comparison of the frequency on different types of partients, the distribution by anatomical site or histological type, the age group distribution and finaly a revision of some factors which could be in relation with the frequency of these types of cancers in our country.

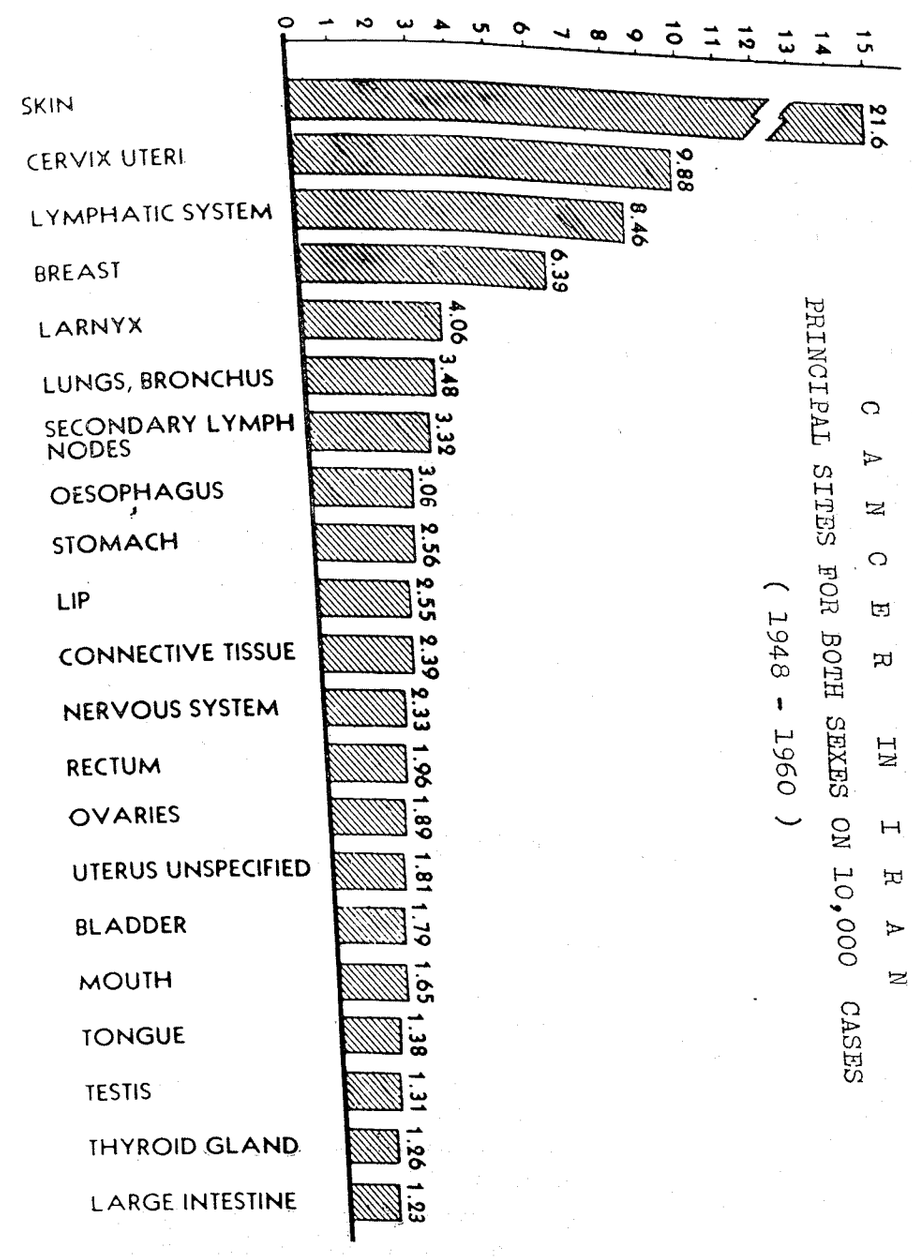
In addition, our figures are used to compare, the prevalence of the most frequent cancers of Iran, with some other published statistics gathered by the collegues of the neighbouring Countries.

TABLE No. 5

CANCER IN IRAN

PRINCIPAL SITES FOR BOTH SEXES ON 10,000 CASES

(1948 - 1960)



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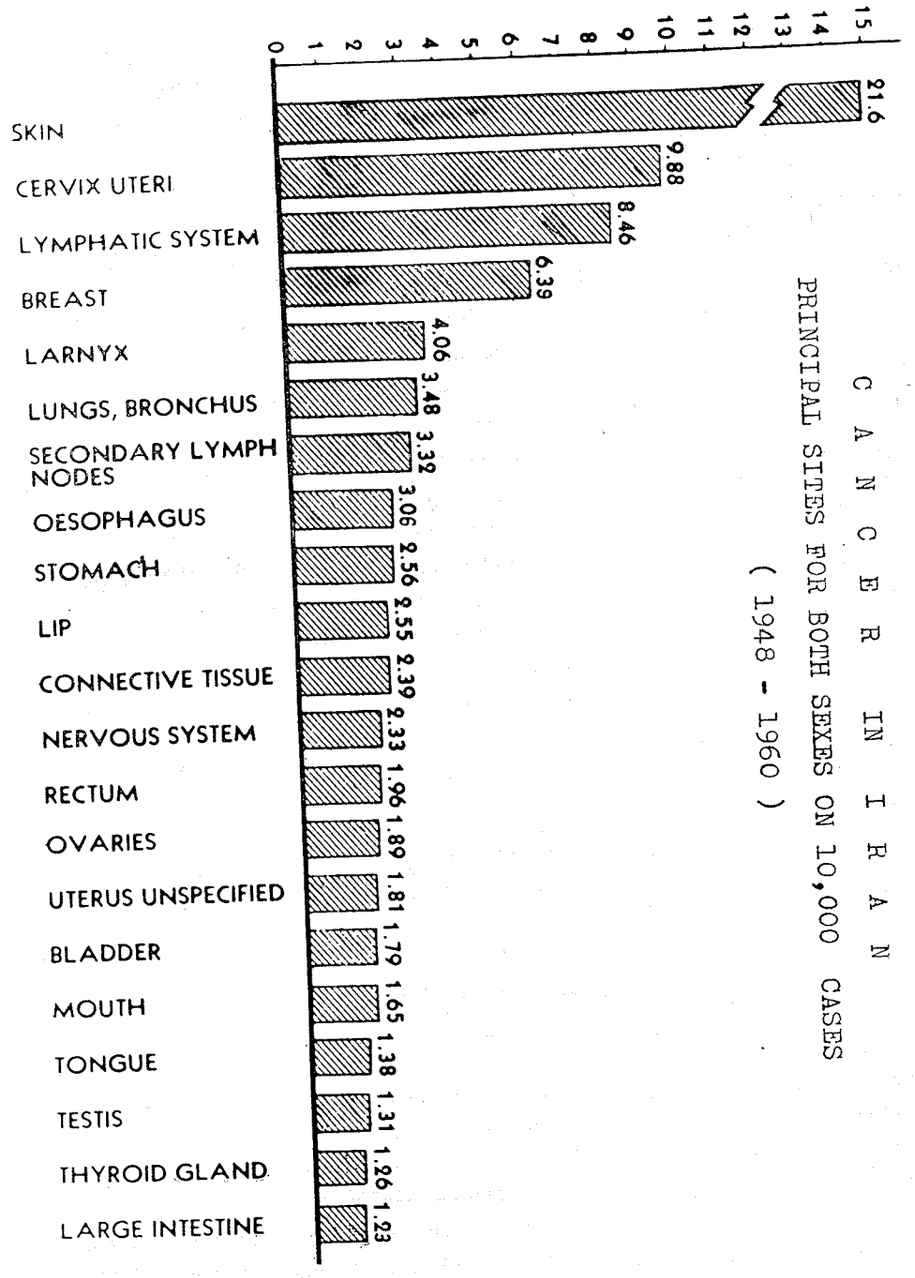


CANCER OF THE SKIN

As seen above, the cancer of the skin accounts for 21.6% of all the cases, both in men and women. Out of 2,159 cases observed, 1,445 cases relate to men (26.15% of the total cases in men) and 714 cases relate to women (15.95% of the total cases in women). That is to say, the sex ratio is a little more than 2/1. This difference can be attributed, undoubtedly, to the effect of the sun's rays on the skin of men who are more exposed to sun than women by the mere fact that a great number of men work longer hours in the open air.

The Comparison of the Frequency of Skin Cancer on Different Types of Patients

In comparing the private patients with the hospital patients, it is seen that there is a vast difference in the ratio (see Table 6). Since with the private patients we observe only 11.5% of the total skin cancers, while in the hospital patients this ratio rises to 23% (twice as much). It should be noticed, however, that this ratio is almost the same in the patients of different hospitals as that patients of the Cancer Institute.

TABLE No. 6

Cancer of Skin

Comparative Ratio on Different Patients

SOURCES OF PATIENTS	PERCENTAGE IN TWO SEXES
PRIVATE PHYSICIANS	11.50%
CANCER INSTITUTE	26.80%
HOSPITALS	23.00%
TOTAL :	21.60%

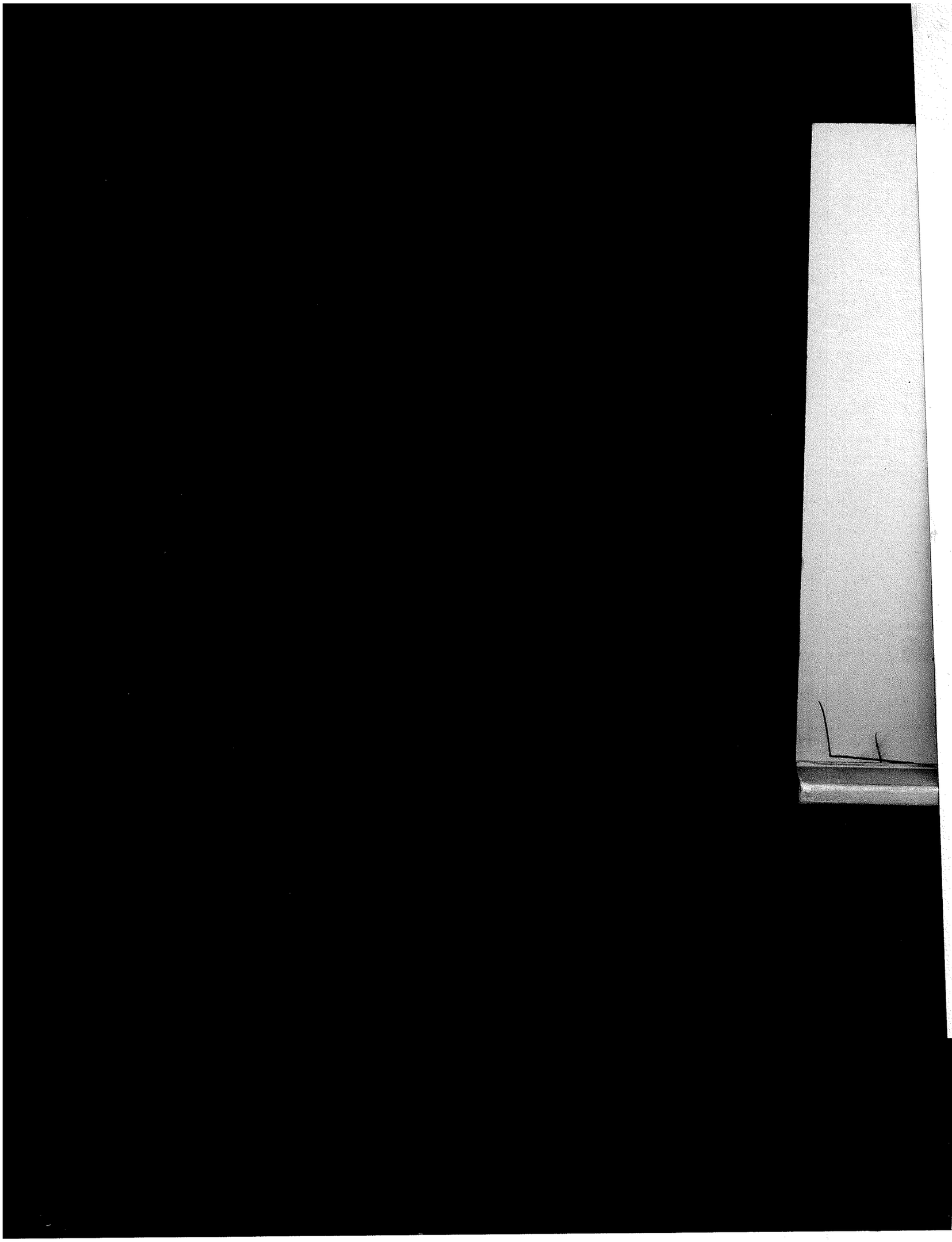
This vast difference may be attributed to the living conditions as well as the professions of these two groups of patients.

Most of the Hospital patients, (including Cancer Institute patients) are workers and farmers, who because of the nature of their occupation, are exposed to sun rays and more inclined to have their clothes contaminated with different irritative products or chemicals (such as fertilizers, Tar, petrol, etc.) while working, and who are also not in the habit of paying due attention to the sanitation of their skin. As a result of these factors, the ordinary skin lesions, which patients neglect to refer to specialist in time, could be transformed to skin cancers.

With regard to our private patients, the situation is different, since this group comes from the well-to-do srratum of the society, they are less exposed to sun rays, and usually their professions are such as would prevent them from contracting various skin diseases. Furthermore, it is easy for this group to observe more the rules of sanitation, and to seek medical treatment as soon as they come to observe signs of ordinary cutaneous lesions. Thus, we have fewer cases of skin diseases in this group of society than in the workers and farmer classes; also this group of patients have better nourishment, which causes their skin, in turn, to store more fatty substances, a factor which cannot be uninfluential in the production of skin lesions, which could be tranformed to cancer.

As our statistics are the result of laboratory diagnosis of cancer, the difference in frequency amongst the hospital and private patients cannot be said to be due to the lack of care amongst the private patients, or to the more frequent visiting and biopsies of the hospital patients in the skin disease clinics. The difference must be explained by the manner of living, environment and the occupations of these two groups of patients. There could be also other causes for this difference, which are unknown to us, and it is for this reason that a series of researches should be undertaken in this field in order to discover the real causes of frequency of skin cancer in Iran with a view to combatting it.

Generally speaking, we must state that skin cancer is one of the most common cancers in the world, caused by physical and chemical reactions on the skin. The various statistical figures obtained in the world point out that this kind of disease is more frequent amongst fishers and farmers who are more exposed to the sun's rays and ultra-violet rays. It is for this reason, that in countries where the sun is hotter and the climate drier, such as Iran, the chances are more for its occurrence in the skin.

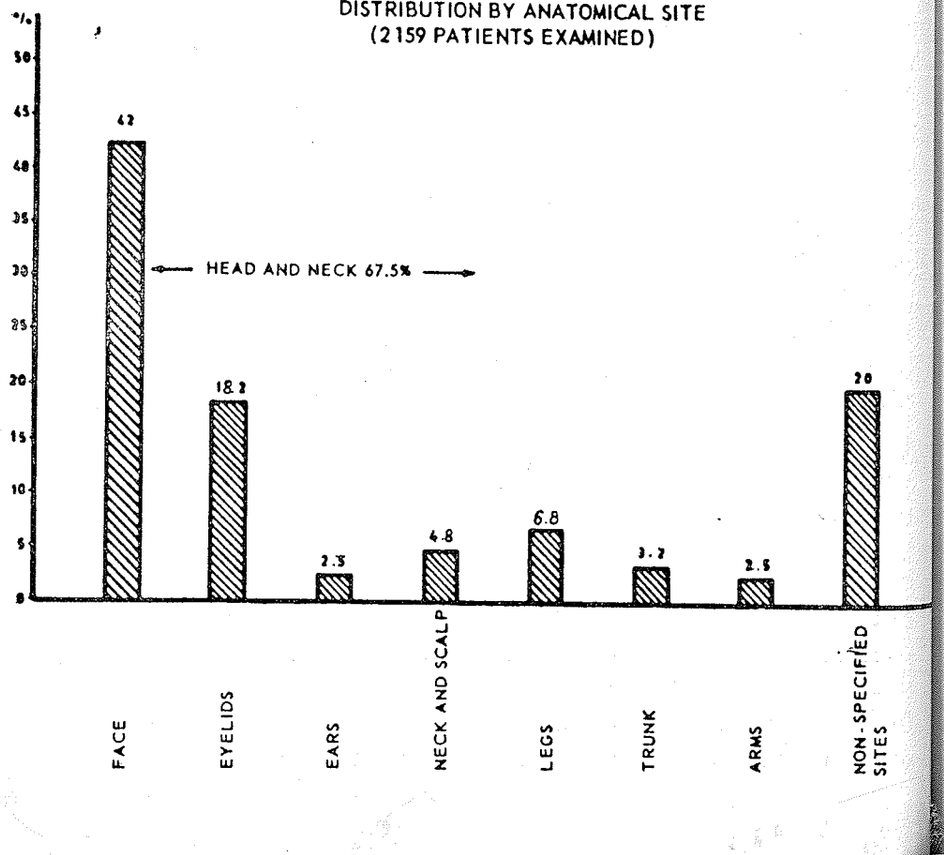


Distribution of Skin Cancer by Anatomical Site

Table 7 shows the Distribution of skin cancer in the various parts of the body. In general, 67.5% of skin cancers occur on the head, face and neck « organs more exposed to the sun's rays », in the following order: 42% on the face ; 18,2% on the eyelids; 2.5% on the ears and 4.8% on the neck and scalp. 6,8% of cases occur on the legs and feet, 3,2% on the body trunk and 2,5% on the arms and hands. The reason for the relative frequency of occurences in the legs may be due to the fact a certain number of workers and farmers, very often, work with naked legs and feet, or with defective, foot covers, and therefore are more prone to contract skin diseases which could be transformed, after a long period of irritations and reinfections, to skin cancer.

TABLE No. 7

CANCER IN IRAN
MALIGNANT NEOPLASMS OF THE SKIN
DISTRIBUTION BY ANATOMICAL SITE
(2159 PATIENTS EXAMINED)

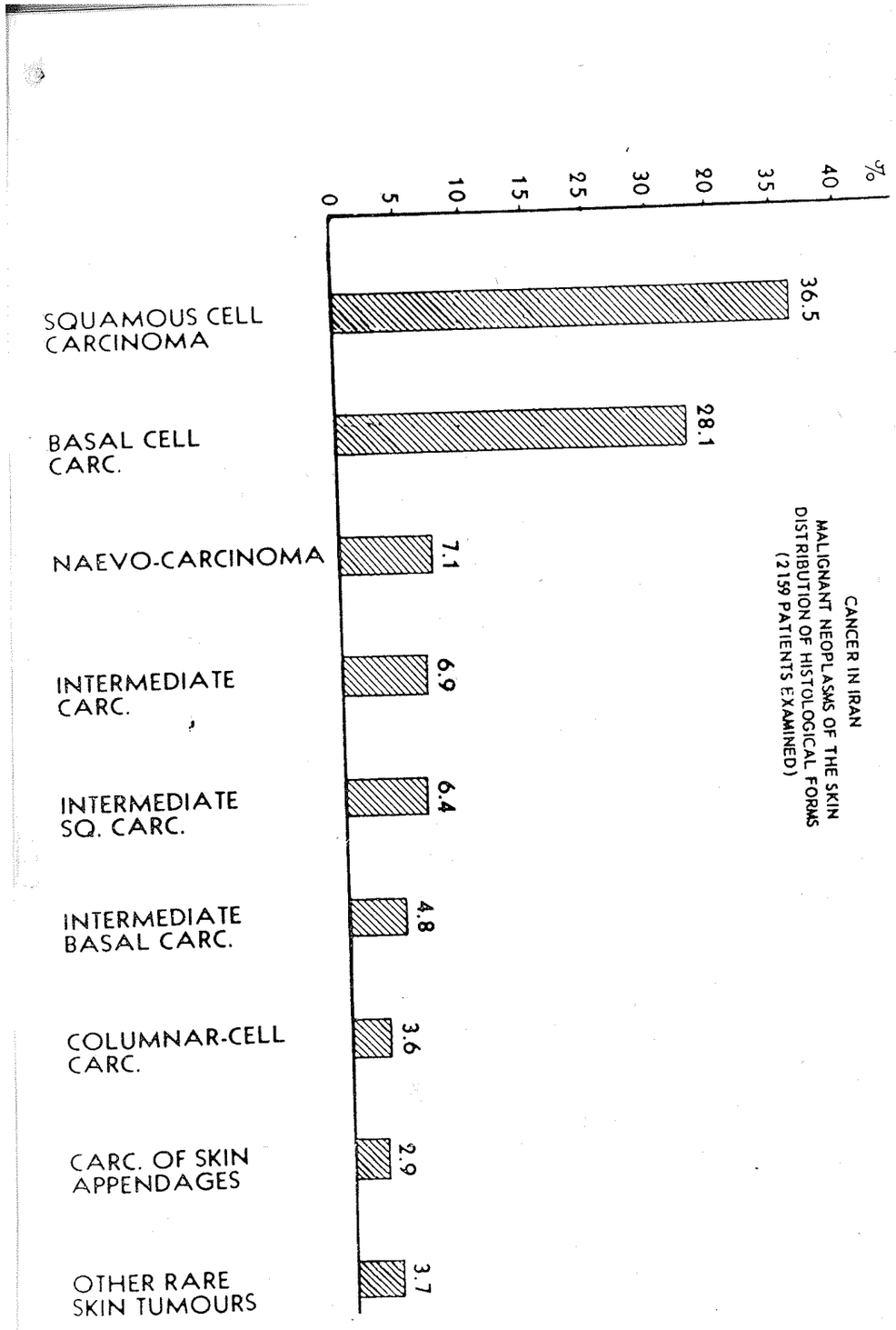


Distribution of Skin Cancer by Histological Forms

We had opportunity to classify 2,159 histological sections of skin cancers observed in different laboratories. As shown in Table 8 the epidermoid type is the most frequent type of cancer, as evidenced by the fact that more than two-thirds of our patients suffered from this type.

The Squamous cells carcinoma constitute 36.5%. and in 6.4% of the cases we had intermediate type predominating the squamous cells. The basal cells carcinoma seems to be frequent also, and constitute 28.1% of all the cases, and in the intermediate from we find that 4.8% shows a tendency towards basal cells carcinoma.

The Naevocarcinoma is quite frequent in Iran, relatively speaking, and constitutes 7.1% of all the malignant tumors of the skin. Pure intermediate type of malpighian carcinoma are seen in 6.9% of cases. The columar cells carcinoma constitute 3.9%, and we had the carcinoma of skin appendages, either of sebaceous glands or sweat glands in 2.9% af all the cases. Other rare types which have not been classified separately constitute 3.70% of all the skin cancers observed in our study.



Age and skin cancer frequency : Generally speaking, skin cancer belongs to old age groups, and growth usually begins after the age of 50. This is because the changing over to cancer of cutaneous chronic ulcers, precancerous skin lesions, and the burnt or sun exposed organs of the body, requires sometimes about 20 years to take place.

As shown in the table No 9 most skin cancer among our patients occurs between 50 to 69. In rare cases we have observed cancer in ages less than ten, who are afflicted by Naevo-carcinoma of the skin.

TABLE No 9

Distribution of Skin Cancer in Different Age Groups on 1.500 Cases

AGE GROUP	MALE		FEMALES		TOTAL	
	NUMBER	%	NUMBER	%	NUMBER	%
0 to 4 years	2	0,3	1	0,2	3	0,2
5 to 9 »	3	0,4	3	0,5	6	0,4
10 to 14 »	7	0,8	3	0,5	10	0,6
15 to 19 »	7	0,8	3	0,5	10	0,6
20 to 24 »	19	2,0	7	1,2	26	1,8
25 to 29 »	33	3,4	19	3,6	52	3,8
30 to 34 »	56	5,7	28	5,2	84	5,6
35 to 39 »	50	5,1	35	7,0	85	5,6
40 to 44 »	91	2,2	50	10,0	141	9,4
45 to 49 »	92	9,3	39	7,5	131	8,6
50 to 59 »	238	23,8	131	26,0	369	24,6
60 to 69 »	266	26,7	135	27,0	401	26,6
70 to 79 »	97	9,7	44	8,4	141	9,4
80 and plus	28	2,8	13	2,4	41	2,8

THE COMPARISON OF THE PREVALENCE OF SKIN CANCER IN IRAN WITH NEIGHBOURING COUNTRIES

In European countries the prevalence of skin cancer varies from North to South from 7 to 23% in all cancer cases. In the extreme north, where the sky is usually cloudy and the sunshine is not too bright, skin cancer is rather less than the southern part where the sky is mostly clear and the sunshine is too bright.

In the Near East and Midle East countries skin cancer is usually as common as Iran.

In Lebanon the different statistics published by H. AZAR and ISSA from the Department of Pathology and Radiology of the American Universiy of Beirut, and the statistics of the French Faculty of Medicine of Beirut (Instituts of Radiology) Published by P. PONTHUS, vary between 8 to 24% of skin cancer on the total cases of cancers observed in the Pathology Department or Radiology Department.

The Statistic published by ESER from the cancer cases seen at the Istanbul Cancer Institute shows 22,5% of skin cancer.

The same author on a total of 50,000 cancer cases gathered in Turkey, found 18,5% of skin cancer in two sexes.

The frequency of skin cancer in U. S. S. R. varies from North to South. In the northern part of the country there is only 8,5% of skin cancer where as in the Caspian Sea area there is 14% and in the Black Sea area 23% of the total cases of cancer.

At the Cancer Institute of Pakistan (Karachi) MANZOOR ZAIDI found only 4,6% of skin cancer in a total of 1138 caees observed in 1963.

The skin cancer in East Pakisan is less than the West Pakistan. S. F. HUQ gathered during four years only 1,5% of this type of cancer on a total of 3,650 cancer cases observed in the Department of Radiology of Chittagong Medical College Hospital.

At the Radium Institute of Jerusalem (Israel) the skin cancer is seen by HOSHMANN in 14% of all the cancer cases.

Ruth Steinitz showed, during the years 1960 and 1961, 14,15% of all new cancers were located in the skin.

The skin cancer is seen in 12% of all cancers in Iraq. This prevalence is published by Ali SHIRAKA on a total of 770 cancer cases observed in 1962 in the Republic Hospital of Bagdad.

TABLE No 10
Skin Cancer
The Comparison of The Prevalence in Iran With Neighbouring Countries

COUNTRIES	ZONE	INSTITUTION	%
TURKEY	ISTANBUL	Cancer Institute	22,50
	DIFF. CITY	Hospitals	18,00
LEBANON	BEIRUT	Institute of Radiology (F.F.M.)	13,32
		Department of Radiology (A.U.B.)	8,30
		Pathology Departmet (A.U.B)	24,70
ISRAEL	JERUSALEM	Radium Institute	14,00
	DIFF. CITY	Cancer Registry	14,15
IRAQ	BAGDAD	Dep. of Radiology, Republic Hospital	12,00
PAKISTAN	CHITTAGONG	Radiology Department, Med. Col. Hosp.	1,50
	KARACHI	Cancer Institute	5,60
U. S. S. R.	WHITE SEA	W.H.O. Statistics	8,40
	CASPIAN SEA	W.H.O. Statistics	14,00
	BLACK SEA	W.H.O. Statistics	23,00
IRAN	TEHERAN	Cancer Institute	26,80
		Dep. of Pathology, Med. School	23,00
		Private Pathology Laboratories	11,50

CANCER OF CERVIX UTERI

This type of cancer is the most common type among women, comprising 22% of all the cancer cases in women in our study. The ratio of cervix cancer to the total of 10 000 cancerous patients stands at 9,88% giving it second place in the frequency of general statistic of cancer in Iran.

In most countries, cancer of the breast is more common than cancer of cervix whereas in Iran we have the reverse. In our general statistics, cancer of the breast has been observed in 6,39% of the total cases, whereas cancer of the cervix has been in 9,88% of the cases. In the figures of cancer amongst women (total number of women's cancers : 4,477 cases) the variation is even greater, cancer of the cervix being 22%, while that of the breast is only 13,4%.

Generally speaking, cancer of the cervix uteri is one of the most common types of cancer to be found in different countries. In Iran, too, it is very common, being caused, very probably, by the same factors which have been studied very extensively by different researchers. These factors, can be said in brief to be as follows :

(1) There is direct relationship between the number of pregnancies and cancer of the cervix. In Iran a great number of women, especially from the lower classes, have numerous children. (*)

(2) There is direct relationship between the age of marriage and the frequency of cancer of the cervix. In various statistics it has been proved that amongst women who get married between the ages of 18 and 20, the frequency of cervix cancer is higher. This conclusion agrees with our figures.(*) Incidentally, it should be mentioned, that cancer of the cervix uteri among women who have not been married is very rare.

(3) Another factor which may have an influnce in the high frequency of cancer of the cervix is a natural predisposition of some nations or races to attract this type of cancer. It may be possible that the Iranian race, if we may be allowed to consider the Iranians as belonging to a distinct race, is more prone to cancer of the cervix uteri.

There could be other factors causing the high frequency of cancer of the cervix in Iran, which must be studied thoroughly and diligently, so

(*) Reports of first national census of Iran 1956. General Department of public statistic, Ministry of Interior Iran, Tome II.

that eventually we may be able to prevent this frequent type of cancer In Iran.

Regarding the high frequency of cervix uteri cancer, and in view of its early detection and diagnosis, a special department has been established since 1960 in the women's Hospital of Teheran, which is one of the groups of establishments attached to the Medical School. This hospital is under the direction of Professor of Gynecology (Dean DJEHAN SHAH, SALEH, M. D.), and the hospital's early detection and cytology laboratory is under the supervision of Associate Professor of Gynecology (A. MOVAHEDI, M. D.). Here they use the Papanicolaou technique in cytology, and all hospitalized patients, and those, who, in the course of out-patient consulation, are suspected of suffering from cancer, are subjected to cytological examination and, if necessary, to biopsy and histological examinations.

This Hospital does very valuable case-finding work, but its work is, unfortunately, limited because of the number of beds, staff and technical equipment which are inadequate for the needs of a large city such as Teheran.

We started, since 1961, the cytological examination of different fluids, including vaginal smears, by fluorescent microscopy in the Department of Pathology of Medical School. This new technique facilitates our routine examinations which were done by Papanicolaou methods.

The Pathology Department of the Cancer Institute, established recently a cytology laboratory for Papanicolaou and fluorescent microscopy examinations , under the supervision of pathologists Associate Professors S. AZARMI, M. D. and A. RABANI. M. D.

These cytology laboratories help the out-patients of different gynecological consultation, for the early detection of cancer and the diagnosis at the first stages.

Consideration is at present being given to a large project of mass screening and early detection of cervix cancer, by the development of cytology laboratories through the training of cytopathologists for the other gynecological centres of Teheran and other towns of Iran. This would make it possible, in the future, to expand the activities for the prevention, early detection, diagnosis at the first stages and the treatment of the cervix cancer, which, as we have previously stated, is the most frequent type of cancer among women in Iran.

The Comparison of the Frequency of Cervix Cancer

On Different Types of Patients

Apart from the high frequency of the cancers of cervix in Iran, as it is shown in table N° 11, there is also a vast difference of frequency, (23% against 16%) of this type of cancer among our public hospital patients (comprising usually the poor class) and the private physician's patients (comprising the wealthy class). The statistics show only 16.2% of our private patients (women's statistic) suffer from cancer of cervix (8.2% in the total figures on 10,000 cancers) whereas among the hospital patients this ratio reaches 23.8% (as against 10.7% of all cancer cases).

TABLE No 11

Cancer of thc Cervix Comparative Ratio on Different Types of Patients

SOURCES OF PATIENTS	GENERAL PERCENTAGE	PERCENTAGE ON WOMEN
PRIVATE PHYSICIAN	8.20%	16.20%
CANCER INSTITUTE	11.20%	24.80%
HOSPITAL	10.30%	22.80%
TOTAL :	9.88%	22%

This difference could be due to the frequency of childbirth and marriage at very young ages,(❁) the disregard of rules pertaining to the sanitation of reproductive organs, non-consultation with medical specialists in time of need, various injuries sustained during labour, and other factors on the low class women. Since women of a higher standard of living get married later and give birth only to few children and have more opportunities and possibilities to observe the rules of sanitation, they consequently suffer less from this type of cancer.

(❁) Report of First National Census of Iran 1956/. General department of Public Statistics, Ministry of Interior of Iran. Tome II.

Histological Types of Cervix Cancer

As seen in Table 12 we have been able to classify 988 cases from the standpoint of histology The various types of epidermoid carcinnoma make 93% of all the cancers of cervix, and it is only in rare cases we have come to observe other types of cancers of this organ. These rare types consist of, primarily, the glandular form of cervix uteri cancer which constitutes 6.2% of the total cases. The rest consist of few cases of in-situ carcinoma (0.8%) and 0.30% cases of atypical forms.

In the various types of epidermoid carcinoma, 49.8% consist of squamous cells carcinoma, whereas the basal cells carcinoma compose only 1,6% of the cases. The various types of intermediate carcinoma form 41%, of which, 21.1% are squamous cells predominating and 1.0% basal cells predominating. The rest, 18.8%, are of unindentified purely intermediate type.

In comparing these figures with the figures obtained in other countries, we notice a slight variation. In most published statistics, the basal cells carcinoma is more frequent than the results obtained in Iran, and quite reversely, we have more intermediate types than other published statistics.

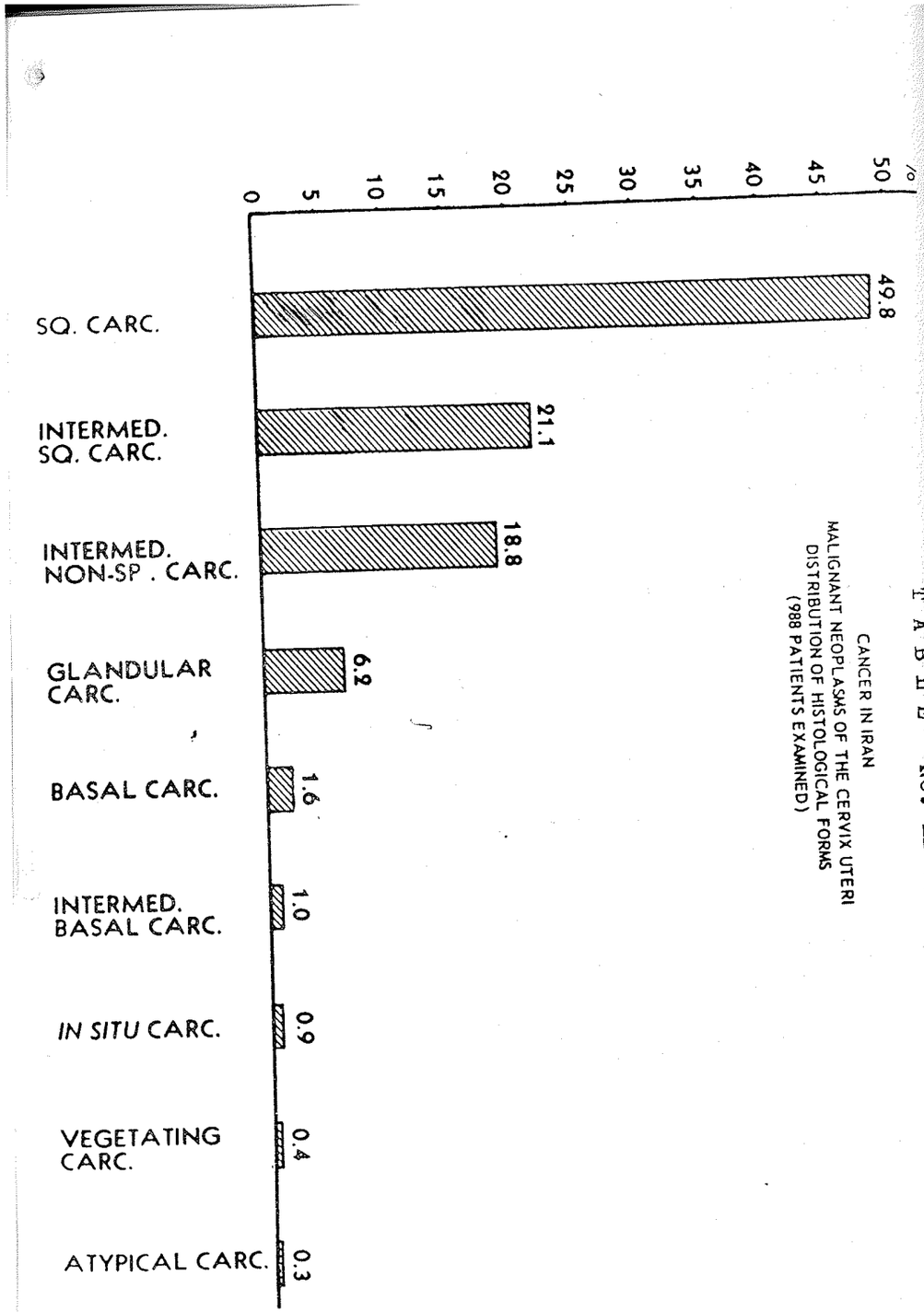


TABLE No. 12

CANCER IN IRAN
MALIGNANT NEOPLASMS OF THE CERVIX UTERI
DISTRIBUTION OF HISTOLOGICAL FORMS
(988 PATIENTS EXAMINED)

Age and cancer of the cervix: In our statistics we have found that cancer of the cervix occurs mainly in the 35 to 54 years age group, reaching the highest peak in the 50 to 54 group. Our youngest patients, in two cases, were 10 and 19 years old. (See Table No 20).

The Comparison of the Prevalence of Cervix Uteri Cancer in Iran with Neighbouring Countries

Various statistics are published on the prevalence of cervix cancer in Lebanon. Ponthus observed 20.16% of this type of cancer on the patients refered to the Radiology Institute of Hotel Dieu Hospital of Beyrouth. The cancerous patients refering to the Department of Radiology of American University of Beyrouth showed only 9,10% of cervix cancer. Azar, in the Department of Pathology of the American University of Beyrouth observed 14,2% of cervix cancer between the patients suffering from different type of cancers.

In Turkey, the cervix cancer seems to be rare. The figures gathered by Eser in Istanbul Cancer Institute showed only 5,3% of this type of cancer.

Another statistical data published by the same author on 50.000 cancer cases seen in Turkey, shows almost the same figures, 4,8% of cervix cancer.

The statistics published by Manzoor Zaidi in West Pakistan (Cancer Institute of Karachi) show a prevalence of 9,1% of cervix cancer on a total of 1138 cancer cases observed in 1963.

In East Pakistan the statistics shows only 3,9% of cervix cancer on a total of 3,650 cancers observed from 1960 to 1964 by S. E. HUQ in the Department of Radiology of Chittagong Medical College Hospital.

In the Department of Radiology of Republic Hospital of Bagdad, Ali Shikara observed 6,3% of cervix cancer during the year 1962.

The general statistic, on the different population of Israel, shows 8% of cervix cancer (Hoschman, Radium Institute of Jerusalem).

In a new publication of Cancer Registry of Israel, Ruth Steinitz. shows that the prevalence of new cases of cervix cancer observed during the years 1960 and 1961 is only 1,02% of all cancers.

The detail of the above figures are shown in the table No. 13

TABLE No. 13

Cervix Cancer, Comparison of Prevalence in Iran with Neighbouring Countries

COUNTRIES	ZONE	INSTITUTION	%
TURKEY	ISTANBUL	Cancer Institute	5,30
	DIFF. CITY	Hospitals	4,8
LEBANON	BEIRUT	Institute of Radiology (F.F.M.)	20,16
		Department of Radiology (A. U. B.)	9,10
		Pathology Department (A.U.B.)	14,20
ISRAEL	JERUSALEM	Institute of Radium	8,00
	DIFF. CITY	Cancer Registry	1,02
IRAQ	BAGHDAD	Dep. of Radiology, Republic Hospital	6,30
PAKISTAN	CHITTA-GONG	Radiology Dep. Med. College Hospital	3,90
	KARACHI	Cancer Institute	9,10
IRAN	TEHERAN	Cancer Institute	11,20
		Dep. of Pathology, Med. School	10,30
		Private Pathology Laboratories	8,20

PRIMARY CANCER OF THE LYMPH GLANDS

The primary cancers of the lymph ghlands hold the third place in our statistics, comprising 8.46% of all the cancer cases. This is to say that 846 patients of our 10,000 cases were suffering from the malignant lymph gland tumors, such as lymphosacroma (Lymphoblastic or Lymphocytic) Retticulo - sacroma, Lympho-reticulosarcoma, malignant Lymphogranuloma or ordinary malignant Lymphoma.

Out of 841 patients, 639 were men, showing that the frequency among men was about 3 times more than among women.

Generally speaking, malignant tumors of the lymph glands, like other diseases of these organs, are very common in Iran. If we take into consideration in this survey the malignant lymphatic tumors, both primary and secondary (metastasis) we will notice that about 11.8% of all the cancers observed in our survey are in the lymph nods, giving this type of cancer second place in general statistics.

In order to obtain complementary information about the frequency of lymph gland diseases, especially malignant tumors, it would be quite appropriate to refer to the statistics presented by K. Armine, M. D., at the Annual Congress of the International College of Surgeons, (Iranian Section) in 1960. Out of the 39,200 histological examinations carried out by the pathological labortories of Medical School and the Cancer Institute, 3,579 histological examinations were of the lymph glands, thus indicating that 9% of the tissues or organs sent for the examination were lymph nods. This ratio in itself proves the wide extent of frequency of this type of disease in Iran. From the standpoint of the ratio of the various lesions we submit here under Table 14, the results of histological examinations on 2,700 lymph glands carried out in the course of 20 years.

TABLE No. 13

Cervix Cancer, Comparison of Prevalence in Iran with Neighbouring Countries

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	DIFF. CITY	Hospitals	4,8
LEBANON	BEIRUT	Institute of Radiology (F.F.M.)	20,16
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		Pathology Department (A.U.B.)	14,20
ISRAEL	JERUSALEM	Institute of Radium	8,00
	DIFF. CITY	Cancer Registry	1,02
IRAQ	BAGHDAD	Dep. of Radiology, Republic Hospital	6,30
PAKISTAN	CHITTA-GONG	Radiology Dep. Med. College Hospital	3,90
	KARACHI	Cancer Institute	9,10
IRAN	TEHERAN	Cancer Institute	11,20
		Dep. of Pathology, Med. School	10,30
		Private Pathology Laboratories	8,20

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TABLE No. 14

Distribution of Lymph Glands Lesions On 2.700 Patients

LYMPH GLANDS LESIONS	NUMBER OF CASES	RATIO
TUBERCULOSIS	1067	39.5%
PRIMARY CANCERS	454	16.8%
INFLAMMATION	440	16.3%
HODGKIN'S DISEASE	296	11.0%
METASTASIS	289	10.7%
NORMAL LYMPH NODS AND OTHER RARE DISEASES	154	5.7%
TOTAL :	2700	100%

As shown in the previous table, the primary cancers of lymph glands are very common, and hold second place in the frequency of lymph glands lesions. If we add up all the cases of malignant lesions of lymph nods in this study we shall come to the conclusion that 38,5% of all examined lymph glands showed histological signs of malignancy, and this fact in itself confirms also the high frequeney of malignant tumors of lymph nods in Iran. This fact requires a continuous and precise study in co-operation with pathologists, general practitioners, surgeons, bilogists and epidemiologists, in order to discover the cause of such a high frequency of lymph gland disease, especially malignant lesions of these organs, in Iran.

The comparison of the frequency of lymph nods malignant tumors on different types of patients

As shown in Table 15, there is no sharp variation in frequency, and in fact it can be said that the frequency is almost the same with regard to both classes, private and hospital patients.

TABLE No. 15

Cancer of Lymph Glands Compartive Ratio on Different Types of Patients

SOURCES OF PATIENTS	GENERAL PERCENTAGE
PRIVATE PHYSICIANS	7.8%
CANCER INSTITUTE	8.3%
HOSPITALS	8.5%
TOTAL	8.46%

Distribution of malignant tumors of lymph nods by anatomical site : As shown in Table No. 16, we have been able to classify 346 cases of lymph nods primary cancers from the anatomical standpoint. Unfortunately, in certain numbers of cases (16,7% of all the lymph nods cancers) we had no precise and complete information about the exact location of the tumor.

The anatomical distribution of these cancers shows that the malignant tumors of the neck's and face's lymph nods form 46% of all the cases, the lymph glands of arm and axilla show primary malignancy in 13,3%, and those of the intra-abdominal glands in 12,8% of all the cases. The lymph nods of legs and inguinal region hold fourth place, while those of intra-thoracic rank fifth, with 2% of all the cases.

While in certain cases malignant tumors of the lymph nods start to grow simultaneously in several regions, nevertheless, in our figures we have found only in 0,5% of all the cases, malignancy in several groups nods. We believe that the frequency must be much more than this, and that our information regarding the patients was limited to the region where the lymph glands were remeved.

Age and frequency of lymph nods cancer : This type of cancer has been observed in patients whose age varies from on to 84 years. Among 556 patients, of whose age we had information, seven of them were less than 5 years old (5 boys and 2 girls), four of whom suffered from Hodgkin's Disease, and three of them from Lympho-sarcoma.

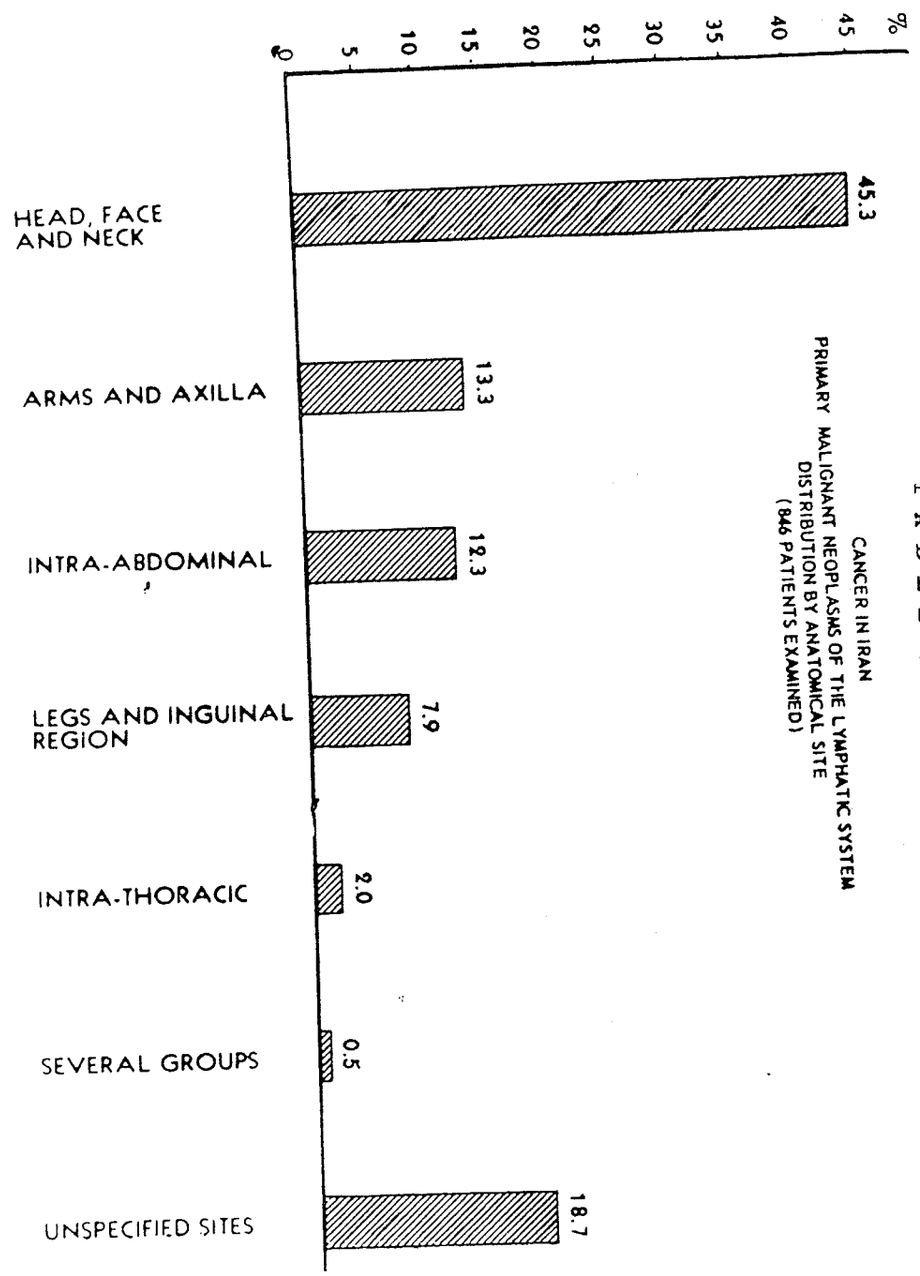

TABLE No 16

CANCER IN IRAN

PRIMARY MALIGNANT NEOPLASMS OF THE LYMPHATIC SYSTEM
DISTRIBUTION BY ANATOMICAL SITE
(846 PATIENTS EXAMINED)

28 patients were in the age group of 5 to 9 (10 cases of Hodgkin's Disease and 18 of Lympho or reticulo-sarcoma. The high frequency of this type of malignant tumor was found between 20 to 54 years (Table 17)

TABLE No. 17

Primary Malignant Neoplasm of the Lymph Glands

Age Distribution on 556 Cases

AGE GROUPS	MEN		WOMEN		TOTAL	
	Number	%	Number	%	Number	%
0 to 4 years	5	1,3	2	1,2	7	1,2
5 _ 9 »	33	8,4	15	8,9	48	8,6
10 _ 14 »	20	5,2	12	7,0	32	5,6
15 _ 19 »	24	6,2	11	6,3	35	6,4
20 _ 24 »	34	8,8	15	8,9	49	8,7
25 _ 29 »	28	7,1	15	8,9	43	7,8
30 _ 34 »	40	10,4	12	7,0	52	9,3
35 _ 39 »	27	6,8	16	9,4	43	7,8
40 _ 44 »	26	6,5	10	5,9	36	6,8
45 _ 49 »	40	10,4	18	10,6	58	10,5
50 _ 59 »	49	13,2	19	11,1	68	12,1
60 _ 69 »	33	8,7	16	9,4	49	8,7
70 _ 79 »	24	6,2	8	4,8	32	5,6
80 and +	3	0,8	1	0,6	4	0,6

The Comparison of the Prevalence of Cancer Of the Lymph Nods in Iran with Neighbouring Countries

The cancers of lymph nods (Primary and secondary) are quite frequent in Iran and some neighbouring countries·

In Lebanon, the statistic of the Radiology Institute of Beirut French Faculty of Medicine published by Ponthus shows 6% of lymph nods cancer, whereas the figurs gathered by Azar and Issa in the Department of Pathology and Radiology of American University of Beirut show respectively 11,7 and 18,4% of all cancer cases observed in these Departments.

In the published statistics, from the cases observed at the cancer Institute of Istanbul, Eser showed 4,8% of primary cancers of lymph nods.

In Pakistan the cancers of the lymph nods are not vrey frequent. The statistics of Manzoor Zaidi show 5% of this type of cancer on a total of 1138 cancer cases observed in Cancer Institute of Pakistan (Karachi) during 1963.

The statitics of the Departement of Radiology of Chittagong Medical College Hospital published by S. F. HUQ shows 7,5% of primary lymph nods cancer on a total of 3,650 cancers observed during four years in East Pakistan.

From the figures gathered by Hochmann at the Radium Institute of Jerusalem (Israel), 9,8% of all cancer cases are seen in lymph nods.

In a statistic published by Ruth Steinitz from the new cancer cases registred in Israel during the years 1960 and 1961, 4,46% of all cacer cases were primary cancers of the lymph nods.

In Iraq, on a total of 770 cancer cases, gathered by Ali Shikara, in the Department of Radiology of Republic Hospital of Bagdad, during 1962, the neoplasme of the lymph nods is seen in 7,2% af all cancer cases.

The W. H. O.'s statistics of cancer for 1961 show a fluctuation between 1,9 to 4,1% of lymph nods cancer in European countries. The highest prevalence is seen in Denmark and the lowest in France.

The detail of the figures are shown in table No. 18.

TABLE No. 18
Primary Cancer of Lymph Nods
Thc Comparison of the Prevalence in Iran With Neighbouring Countries

COUNTRIES	ZONE	INSTITUTIONS	%
TURKEY	ISTANBUL	Cancer Institute	4,80
LEBANON	BEIRUT	Institute of Radiology (F.F.M.)	6,00
		Department of Radiology (A.U.B.)	18,40
		Department of Pathology (A.U.B.)	11,70
ISRAEL	JERUSALEM	Radium Institute	9,80
	DIFF. CITY	Cancer Registry	4,46
IRAQ	BAGDAD	Dep. of Radiology, Republic Hospital	7,20
PAKISTAN	CHITTAGONG	Radiology Dep. Medical College Hosp.	7,50
	KARACHI	Cancer Institute	5,00
IRAN	TEHRAN	Cancer Institute	8,30
		Pathology Department	8,50
		Private Pathology Laboratories	7,80

CANCER OF THE BREAST

This type of cancer was seen in 6,34% of our patients, and holds fourth place. Men are rarely afflicted by this type of cancer. The ratio shows one man for every 17 women.

Among the women, our statistics show 13.4% of malignant tumors of the breast, which hold third place, following cancer of the cervix and the skin (on a total number of 4477 cancerous women)

In Iran breast cancer is less frequent than the cancer of the cervix. which differs from the findings of F. Denoix in some European countries.

The comparison of private and hospital patients

The frequency of breast cancer in our figures, shows a sharp variation in different types of patients. As it is shown in Table No. 19, in the general figures obtained from the Cancer Institute, on 2,471 cancer cases in a three years period, we note 3.9% of breast cancer in both sexes. and 7.7% on women only, whereas in the 10 years period figures gathered from the Pathology Department of Medical School (public hospital patients), on 5,679 cancer cases the frequeney of breast cancer on both sexes was 5.5%, while this ratio rises to 11.4% amongst women patients (4,477 cases). Amongst the private surgeon and private clinic patients (usually high standard-living people), we have gathered figures for the last 14 years, and the frequency of breast cancer shows higher than the above ratios, forming 13.8% on all the patients (both sexes) and 26.9% amongst women only.

TABLE No. 19

Cancer of the Breast
Comparative Ratio on Different
Type of Patients

SOURCES OF PATIENTS	PERCENTAGE ON BOTH SEXES	PERCENTAGE ON WOMEN
PRIVATE PHYSICIANS	13.80%	26.90%
CANCER INSTITUTE	3.90%	7.70%
HOSPITALS	5.50%	11.40%
TOTAL :	6.39%	13.40%

This vast difference may be explained by stating that a number of breast cancers observed in the hospitals have not been subjected to microscpic examination, and, since our figures are based on pathological results, the number of breast malignant tumors sent to the laboratories (Cancer Institute and Medical School) are less than the real number of operated patients, and less than the tumors sent by private surgeons. This, however, cannot be correct, because, according to our observations in different surgical departments, particularly in the Cancer Hospital, all the tumors removed from the breast are subjected to section and microscopical axamination (the extemporaneous examination and frozen sections in the operating room, and later ordinary section in the laboratory). So we can conclude that the difference of the frequency of breast cancer on the hospital and private patients does not depend on the numbers sent to the laboratories, and should depend on a real difference of frequency on these two groups of patients.

If we consider the private lives of these two classes of patients, we note that our private patients belong to a group enjoying a highe standard of living, and are therefore in a better position to refer to private surgeons and clinics. The vast majority of the patients of the public hospitals, however, are those who belong to the lower eschalion of society,

who live a simpler life, and in case of need refer to the Government free hospitals. Does this difference in living conditions mean that those who have a higher standard of living are more prone to cancer of the breast ?

In order to get an adequate reply to this question, it is better for us to probe deeper into the private lives of these people so that we may be able to explain the higher frequency of breast cancer among the people of a higher standard of living.

On the basis of numerous studies and figures, it has become evident that there exists a direct relation between the ferquency of child bearing and the cancer of the cervix uteri, and the reverse relationship in the case of breast cancer. This ratio among our private patients stands as follows : 26,9% cancer of breast, and 16,2% cancer of cervix.

It is well known that in our country the number of children born by the women of the higher level of society, is less than among the women of the lower strata of society, who very often (*) give birth to more than 4-5 children in their lives. The figures among this last group of women stands as follows : 23.5% of cervix cancer and 10.3% of breast cancer. In conclusion, we can say that this noticeable difference between the two groups of public hospital and private clinic patients bears a direct relationship to the number of children born by these two groups.

The second question which arises in this connection is the problem of breast-feeding of the children. It has been shown that women who breast-feed their children for a long time, are less prone to cancer of the breast than those who do not.

In our country, generally speaking, women of lower social and economic stratas feed their children themselves, whereas women of a higher level of society, with an active social life, because of being engaged outside the home, and for other reasons do not breastfeed their children, and feed them with powdered milk.

In addition to these two favorable factors. there may exist other factors in the customs and mode of living of these two groups of patients which cause more frequency of breast cancers in the private and more highly sophisticated patients. For example, the problems of sexual relation-

(*) Reports on First National Census of Iran 1956. General Department of Public Statistics, Ministry of Interior of Iran. Tome II.

ship and the prevention of pregnancy are proved to be effective. Also the continuous irritation of the breast by the use of tight brassieres, and the various kinds of medicine, and more particularly, hormones for enlarging the breast, which are used by women of higher society. These factors may have something to do with the frequency of cancer in this group of people.

The anatomical site and the histological type of breast cancer : Since, in most of the cases, we were ignorant of the exact location of the breast tumor, we were not able to classify our patients from the standpoint of anatomical site of the malignant tumor of the breast.

Nevertheless, we must explain that out of 603 cases observed in women, in 23 cases the malignancy seemed to have started on both sides, and in the majority of cases the woman was advanced in age ; and in three cases the patient was pregnant.

In 12 cases the malignant tumor was outside the breast, and the patient had, surely, an unknown extra breast which had become cancerous, and the microscopic feature of the tumor showed an adenocarcinoma of the mammary glands.

From the standpoint of the histological type of breast cancer, we must admit that we have seen various types of glandular and tubular adenocarcinomas. Paget's disease is quite rare, and seen on 6 patients. The sarcoma of the breast is observed only on 4 patients, out of 603 cases. Unfortunately, we have not yet classified our breast malignant tumors from the standpoint of histology to give the exact ratio on the different types.

The breast cancer observed on 36 men belong, in the majority of cases, to the canalicular adenocarcinoma, and in rare cases, to glandular types.

Age and breast cancer : Our figures show that breast cancer occurs in older patients, but out of 603 women we have observed 3 cases which the patients were less than 12 years (girls of 7-9 and 12 years). The highest occurrence of breast cancer is in the group of ages 35-54 years. There was no difference, from the standpoint of age, between the two groups of patients (Table No. 20).

TABLE No. 20

Malignant Neoplasms of the Cervix and Breast
Age Distribution on 798 Cervix and 502
Breast Cases

AGE GROUPS	CERVIX CANCERS		BREAST CANCERS	
	NUMBER	%	NUMBFR	%
0 to 4 years	—	—	—	—
4-9 »	—	—	2	0,4
10-14 »	1	0,1	1	0,2
15-19 »	1	0,1	3	0,6
20-24 »	10	1,3	10	2,0
25-29 »	47	5,9	21	4,2
30-34 »	71	8,9	23	4,6
35-39 »	122	15,2	63	12,6
40-44 »	126	15,9	70	14,0
45-49 »	131	16,5	75	15,0
50-59 »	171	21,5	162	32,2
60-69 »	84	10,5	44	8,6
70-79 »	18	2,4	18	3,6
80 and plus	16	2,0	10	2,0

The Comparison of the Prevalcnce of Breast Cancer in Iran with Neighbouring Countries

The prevalence of breast cancer in different countries of the Near and Midle East is quite different.

In Lebanon, various statistics are published by different authores. Ponthus observed 10,57% of breast cancer in the patients refered to the Institute of Radiology of French Faculty of Medicine. This type of cancer is found more frequent in Christian women than the Moslem women.

At the Department of Surgery of the Hotel Dieu Hospital of Beirut Atallah, during 12 years dealt with 435 cancer cases, among them 72 patients (16%) had breast cancer.

The figures gathered, during five years at the Radiology Department of the American University of Beirut, by Issa, showed 13,5% of bresat cancer. Azar, in the Department of Pathology of the same University diagnosed, from 1953 to 1960, a total of 2845 cancer cases, among them 23,80% of breast cancer. Another figure prepared by the same author from 1926 to 1940 showed 23,7% of breast cancer in Beirt population.

In Turkey; 10,9% of the patients refered to the Cancer Institute of Istanbul had breast cancer (Eser).

Recently the statistical data published on more than 50,000 cancer cases observed in Turkey the same author shows 9% of breast cancer in two sexes.

In Israel H. Hochmann and Karpas found 21,4% of this type of cancer at the Radium Institute of Jerusalem.

During the years 1960 and 1961, prevalence of the new cases of breast cancer registred in the office of Cancer Registry of Israel and published by Ruth Steinitz, shows only 11,87% of all cancer cases which is different than the above finding.

The statistic of Pakistan Cancer Institute (Karachi) published by Manzoor Zaidi showed 8,7% of breast cancer during 1963 on a total of 1138 cancer cases observed in this year.

TABLE No. 20

Malignant Neoplasms of the Cervix and Breast Age Distribution on 798 Cervix and 502 Breast Cases

AGE GROUPS	CERVIX CANCERS		BREAST CANCERS	
	NUMBER	%	NUMBFR	%
0 to 4 years	—	—	—	—
4-9 »	—	—	2	0,4
10-14 »	1	0,1	1	0,2
15-19, »	1	0,1	3	0,6
20-24 »	10	1,3	10	2,0
25-29 »	47	5,9	21	4,2
30-34 »	71	8,9	23	4,6
35-39 »	122	15,2	63	12,6
40-44 »	126	15,9	70	14,0
45-49 »	131	16,5	75	15,0
50-59 »	171	21,5	162	32,2
60-69 »	84	10,5	44	8,6
70-79 »	18	2,4	18	3,6
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The statistic of Pakistan Cancer Institute (Karachi) published by Manzoor Zaidi showed 8,7% of breast cancer during 1963 on a total of 1138 cancer cases observed in this year.

In East Pakistan the statistic of Department of Radiology of Chitta-gong Medical College Hospital, published by S. F. Huq, showed only 3,4% of breast cancer on 2,000 cancer cases observed in four years.

The Breast cancer is the more frequent type of cancers observed in the Department of Radiology of Republic Hospital of Bagdad. Ali Shikara found 12,2% of breast cancer on a total of 770 cancers cases seen in 1962.

The detail of these figures is showed in table No. 21.

TABLE No. 21

Breast Cancer

The Comparison of the Prevalence in Iran with Neighbouring Countries

COUNTRIES	ZONE	INSTITUTION	%
TURKEY	ISTANBUL	Cancer Institute	10,90
	DIFF. CITY	Hospitals	9,00
LEBANON	BEIRUT	Institute of Radiology (F. F. M.)	10,75
		Department of Surgery (F. F. M.)	16,00
		Department of Pathology (A.U.B.)	23,80
		Department of Radiology (A.U.B.)	13,50
ISRAEL	JERUSALEM	Radium Institute	21,40
	DIFF. CITY	Cancer Registry	11,87
IRAQ	BAGDAD	Dep. of Radiology Republic Hosp.	12,20
PAKISTAN	CHITTAGONG	Radiology Dep.,Med CollegeHosp.	3,40
	KARACHI	Cancer Institute	8,70
IRAN	TEHERAN	Cancer Institute	3,90
		Department of Pathology, Med. School	5,50
		Private Pathology Laboratories	13,80

CANCER OF THE RESPIRATORY TRACTS

Another type of cancer which is very common in Iran is cancer of the respiratory tracts, which comprises 7.5% of all the cancer cases (4.06% cancer of larynx, 3.48% cancers of bronchus and lungs), and, if we consider these together, holds 4th place in the frequency of cancers in our survey being more frequent than the breast cancer of both sexes.

CANCER OF THE LARYNX

Among 10,000 cancer cases we have observed 406 patients suffering from the malignant tumors of the larynx. Of this figure, 327 were men (5.9% of the cancers of men) and 79 women, (1.80% of the cancers of women), showing the ratio of men suffering from this type of cancer to be 3 times greater than that of women.

Comparing our figures with the other published statistics, it shows that cancer of the larynx is more frequent in Iran and neighbouring countries, than in European countries. This poses a problem which must be studied so that we may be more able to fight against it.

From the standpoint of histological types, cancers of the larynx are usually epidermoid carcinomas, and the squamous cells form is the most frequent type of it.

The Comparison of private and Hospital Patients

It is worthwhile to note that there exist some variations in our statistics concerning these two different types of patinets. This is to say that amongst our public hospital patients, 4.2% of them suffer from this type of cancer (3.5% amongst the patients of the Cancer Institute, and 4.6% amongst the other hospital patients) whereas amongst our private patients, 2.7% of them suffer from malignant tumors of the larynx. (See Table No 22)

TABLE No 22

CANCERS OF THE RESPIRATORY TRACTS COMPARATIVE RATIO ON DIFFERENT TYPES OF PATIENTS

SOURCE OF PATIENTS	GENERAL PERCENTAGE
Private Physicians :	13.70%
Larynx	2.70%
Broncho-Pulmon.	11.00%
Cancer Institute :	5.60%
Larynx	3.50%
Broncho-Pulmon.	2.30%
Hospitals :	5.50%
Larynx	4.60%
Broncho-Pulmon.	0.90%
Total :	7.54%
Larynx	4.06%
Broncho-Pulmon.	3.48%

Age and Cancer of the Larynx : Cancer of the larynx, in our figures, shows to be more common in old People. The greater occurrence in the group of ages 45 to 64 years. As older people are much more afraid of cancer, therefore, they are more likely to submit themselves to endoscopic examinations and biopsy. Consequently the cancer is usually diagnosed at the beginning, and in the first stages. In contrast, in the case of Broncho-pulmonary cancers, the specialists find a cerain number of advanced cases. This is probably due to the fact that in our country this cancer starts in middle age, or even earlier, and neither the physicians, nor the patient himself ever thinks of cancer at such an age (Table 23)

TABLE No. 23

MALIGNANT TUMORS OF THE LARYNX AGE DISTRIBUTION ON 298 CASES

AGE GROUP	MALE		FEMALE		TOTAL	
	NUMBER	%	NUMBER	%	NUMBER	%
0 - 4 years	—	—	—	—	—	—
5 - 9 »	1	0,4	—	—	1	0,3
10-14 »	—	—	—	—	—	—
15-19 »	3	1,4	—	—	3	1.0
20-24 »	4	1,7	3	5,0	7	2,4
25-29 »	10	4,2	4	6,6	14	4.8
30-34 »	10	4.2	3	5,0	13	4,3
35-39 »	11	4,8	4	6,6	15	5,0
40-44 »	31	13,2	8	13,4	39	13,0
45-49 »	28	11,8	9	15,0	37	12,4
50-54 »	47	20,2	11	18,4	58	19,5
55-59 »	33	13,5	4	6,6	37	12,6
60-64 »	31	13,2	11	18,4	42	14,0
75-70 »	14	6,0	—	—	14	4,8
70-79 »	14	6,0	3	5,0	17	5,6
80 and Plus	1	0,4	—	—	1	0,3

THE COMPARISON OF THE PREVALENCE OF THE LARYNX CANCER IN IRAN WITH NEIGHBOURING COUNTRIES

Generally speaking cancer of larynx in Iran and some other neighbouring countries is quite frequent.

In Lebanon the figures gathered from 1953 to 1960 by H. Azar at the department of pathology of American Medical School, shows 5.2% of this type of cancer. At the Radiology Department of the same Medical School 4,5% of the patients observed by Issa were suffering from cancer of Larynx.

Ponthus, in the statistics of the Institute of Radiology of the French Medical School, found 4,67% of larynx Cancer in both sexes. The sex ratio in these statistics is very unusual and there are 13 men for one woman suffering from cancer of the laryny.

Eser, among the patients referred to the Cancer Institute of Istanbul found 7,8% of Larynx cancer. Another statistcal data published recently by the same author on a total of 50,000 cancer cases gathered in Turkey, he found 7,7% of larynx cancer.

Amongst the cancers observed at the Cancer Institute of Pakistan (Karachi) Manzoor Zaidi found a total of 20,4% Larynx cancer amongst the Pakistanees population during the year 1963. This high frequency which is quite unusual should be due to the special habits of this population. Zaidi in a large study on the ethiology of oropharyngeal carcinomas in Pakistan showed a prevalence of 78% between the smokers whereas the pakistanees population having no habits showed only 8% of Laryngo-pharyngeal carcinomas.

In East Pakistan S. F. HUQ from the Department of Radiology of Chittagong Medical College Hospital, Showed the prevalence of Laryngo-Pharyngeal Cancer is almost the same and he observed 21,3% of this type of cancer during four years (1960 to 1964) on a total of 3,650 cancer cases.

The situation is almost the same in India. Khanolkar, in a study on 2,000 cancer cases observed during eleven month (1958) found a total of 877 cancer of mouth and adjacent portions of Laryngo-pharynx.

This type of canccr in Pakistan and India is much more frequent

in female sex than the male. This is because this habit of chewing betel leaf is much more prevalent in the female population.

In Israel the prevalence of Larynx cancer is almost the same than the European countries. Hochmann and Karpas in their statistics of Radium Institute of Jerusalem found only 1,6% of this type of cancer which is less than the neighbouring countries.

The figures published by Ruth Steinitz on the new cases of cancers observed during the years 1960, are almost the same and he found Larynx cances in 1,77% of all cancer cases.

The Larynx cancer is frequent in Iraq. In the Department of Radiology of Republic Hospital of Bagdad, Ali Shikara observed 10,8% of this type of cancer on a total of 770 cancers during the year 1962.

This ratio is much lower than the prevalence of larynx cancer in India and Pakistan, whereas it is higher than Iran, Lebanon, Turkey and Israel.

The detail of the above mentiond figures is shows in table No. 24.

TABLE No. 24

CANCER OE THE LARYNX

THE COMPARISON OF THE PREVALENCE IN IRAN WITH NEIGHBOURING COUNTRIES

COUNTRIES	ZONE	INSTITUTIONS	%
TURKEY	ISTANBUL	Cancer Institute	7,80
	DIFF. CITY	Hospitals	7,70
LEBANON	BEIRUT	Institute of Radiology (F. F. M.)	4,64
		Department of Radiology (A. U. B.)	4,50
		Department of Pathology (A. U. B.)	5,20
ISRAEL	JERUSALEM	Radium Institute	1,60
	DIFF. CITY	Cancer Registry	1,77
IRAQ	BAGDAD	Dep. of Radology, Republic Hosp.	10,80
PAKISTAN	CHITTAGONG	Radiology Dep., Med. College Hosp.	21,30
	KARACHI	Cancer Institute	20,40
IRAN	TEHERAN	Cancer Institute	3,50
		Department of Pathology, Med, School	4,60
		Private Pathology Laboratories	2,70

PRIMARY CANCER OF THE BRONCHUS AND THE LUNGS

The primary cancers of the lungs and bronchus form 3.48% of all the cases, in two sexes, bringing them in sixth place in the general statistics. Out of 348 patients subjected to pathological examination, 27 were men (4.90%) and 77 cases belonged to women (1.8%). Nevertheless, the broncho-pulmonary cancers, like the cancers of the larynx, are mors frequent among the men, and the sex ratio is a little less than 3/1. This high frequency in men could be due to the professional air contamination, and smoking habits, which make men more prone to respiratory tract cancers.

In reality, the incidence of the lung and bronchus cancers is higher than the figures obtained by laboratory examination, because a large number of patients consult the specialist at such an advanced period that biopsy or surgical operation is impossible, and these cases are not figured in our statistics.

According to the information given by S. Ghazi, M. D., Director, and J. Tabatabaï, M. D. (*) Endoscopist of the Department of thoracic Surgery of Teheran (Abou Hossein Hospital), a large number of patients, sent to them by different dispensaries of Teheran, for diagnosis and even the treatment of chest diseases, are suffering from advanced and incurable lung cancers, and there is no possibility of biopsy. They do not even require any longer the histological examination to confirm the malignancy of their advanced lesions.

Dr. Ghazi mentionned particularly that a great number of these patients are relatively young. As these patients atract cancer in an unusual age, the diagnois of their pulmonary disease could be confused, by general practitioners, with tuberculosis, (which is quite frequent in Iran); until they consult a chest specialist, who discovers, in fact, an advanced and incurable stage of Broncho_pulmonary cancer,

(*) S. GHAZI, M.D.–J. TABATABAÏ, M. D.: Ten years experiments on Chest Surgery.
Communication to 7th. and 8th. Annual Congress of International College of Surgeons, Teheran. 1962 – 1963.

The Cnmparison of Private and Hospital Patients : As is shown in Table No. 22 there is a great variation of frequency in bronch-plumonary Carcinomas between private patients and public hospital patients. The general figures obtained from the Pathology Laboratory of the Cancer Institute, show 2.30% of broncho-pulmonary cancers, whereas in a 10 years period we find only 0.90% of this type of cancer, diagnosed in the Pathology Department of the Medical School, on public hospitals patients.

Amongst the cases gathered from the private laboratories, the frequency of Broncho-pulmouary carcinomas shows much higher than the above ratio, forming 11% of all the cancer cases.

The interpretation of these unusual variations needs some explications concerning the chest surgery and endoscopy in different hospitals of Teheran.

1) The public hospitals of Teheran, which send the tissue specimen to the Medical School have no special department of chest surgery. Bronchoscopy and biopsy has been started recently in some of these hospitals. Consequently, the figures obtained from the Pathology Department of Medical School show only a few numbers of broncho_pulmonary tumors, which are removed, either by surgical operations in general surgery departments, or by biobsy through the endoscopy.

2) In the Cancer Institute the Chest surgery and endoscopy departments exist, but their activity was very limited during the first years of his establishment. Incidentally, we gathered the figures of the first three years. and we obtained only 2.3% of broncho_pulmonary carcinoma, which is higher than the figures obtained in the other public hospital (0.9%).

3) In our statistics, the large number of figures are gathered from the patients of a private hospital which is established especially for chest surgery (ABOU HOSSEIO HOSPITAL). All the tissues or tumors removed by surgical operations or biopsy, and a great number of bronchial washing products or sputum, for cancer detection, are sent to our private laboratory for microscopic examination. Consequently our private laboratory figures show a large number (11%) broncho_pulmonary cancers.

Generally speaking, the figures obtained from the public hospitals

and Cancer Institute patients, are not representative of the real frequency of broncho - pulmonary cancer in this group of patients. because the number of the chest operations and biopsies are relatively less than the other operations or biopsies in these hospitals.

In conclusion, we must say that we are unable to give the real frequency of the broncho - pulmonary cancers in our different types of patients, and the average of the three different figures, which is 3.48 %, should be considered as a relative frequency of these cancer in our statistics.

Histology of Broncho - Pulmonary Carcinomas : In the charter shown on Table No. 25, the histological froms of the broncho-pulmonary cancers are shown, The various forms of epidermoid carcinoma forms 69% of all the cases. The type of intermediate (non - specified), which it the most common type of it, comprises about the third (33%) and the squamous cells type is observed in 27.9% of the total cases. The glandular carciomas are seen in 17.2% and the types of vegetative and squamo - columnar type each one in 3.3 % of all the cases. The small cells carcinomas (including oated cells) are seen in 5.7% of all cases.

The sarcoma of the lung is very rare, and observed only in 1.6% of all the broncho - pulmonary cancer cases.

The point which differenciates the distribcion of histological forms in Iran from the observation of other histo-pathologists is the greater number of intermediate forms. The same observation holds in the study of histo - logical distribution of cancers of the cervix uteri. As remarked formerly, this difference could depend upon the judgement and interpretation of histo-pathologists, and are absolutely independent of the patient, and the future development of the disease.

Age and the Broncho-Pulmonary Carcinomas : The peak age group of these cancers, in our figures, is between 54 and 64 years. Our youngest patients were a 21 years old man and a 24 years old woman (Table 26).

As was discussed formerly, a certain number of advanced broncho-pulmonary cancer cases, have been observed by our colleagues, pneumo - logists and chest surgeons, among young people. As the biopsy or surgical operation is not possible in these advanced cases they are not figured on our histological statistics.

TABLE No. 25

CANCER IN IRAN
MALIGNANT NEOPLASMS OF THE BRONCHUS, TRACHEA AND LUNGS
DISTRIBUTION OF HISTOLOGICAL FORMS
(348 PATIENTS EXAMINED)

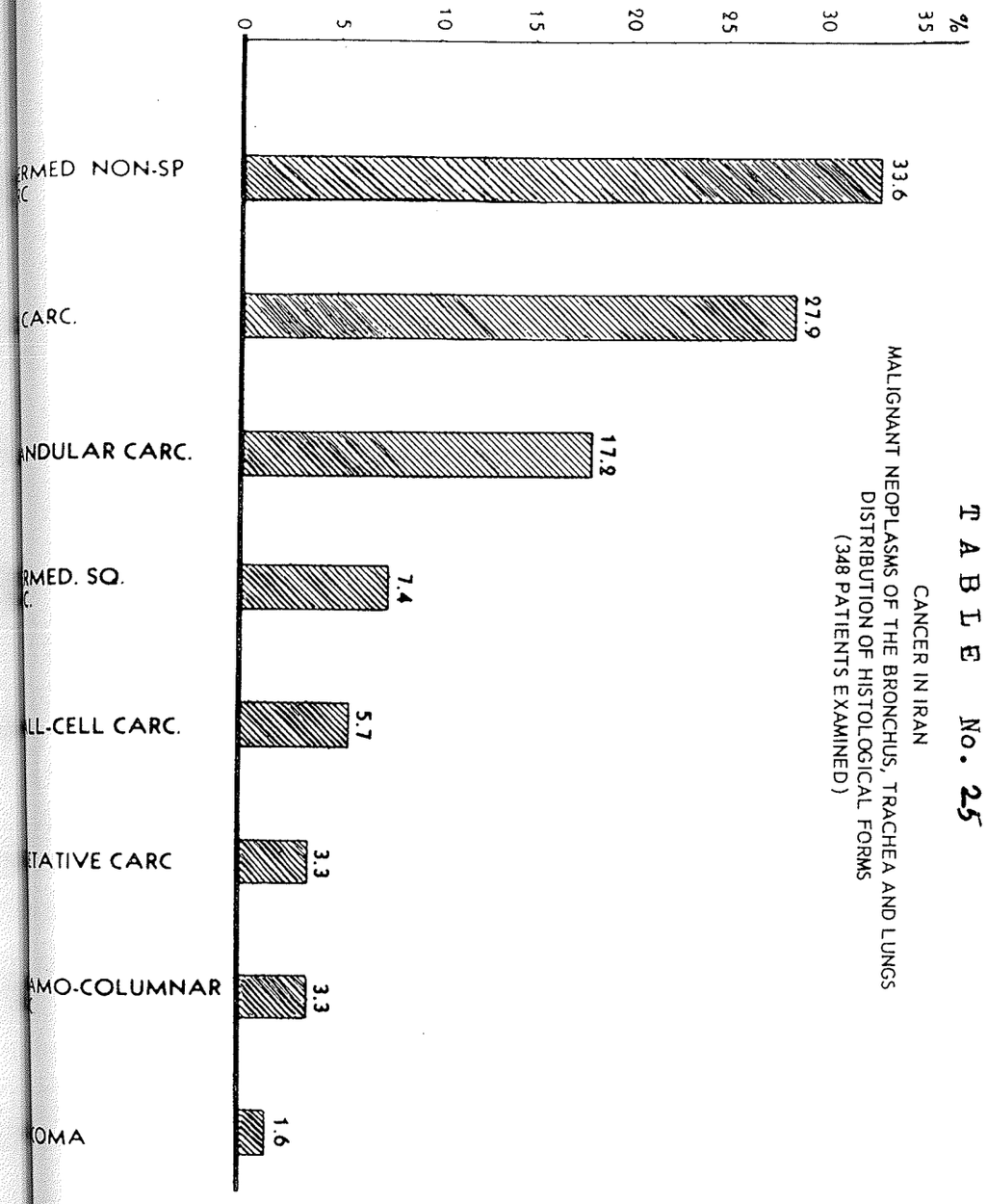

TABLE No. 26

PRIMARY CANCERS OF THE BRONCHUS AND LUNG
AGE DISTRIBUTION ON 263 CASES

AGE GROUPS	MALE		FEMALE		TOTAL	
0 _19 years	—		—		—	
20_24 »	1		1	1,6	2	0,7
25_29 »	3		1	1,6	4	1,6
30_34 »	9		2	3,3	11	3,3
35_39 »	20	8,5	4	6,5	24	8,2
40_44 »	18	8,1	4	6,5	22	7,3
45_49 »	20	8,5	6	9,8	26	8,7
50_54 »	22	9,4	9	14,6	31	10,3
55_59 »	35	15,2	10	16,3	45	15,5
60_64 »	32	13,8	8	13,2	40	13.8
65_69 »	30	13,1	10	16,3	40	13,8
70_80 »	26	11,2	4	6,5	30	10,4
80 Pnd plus	15	9,5	3	3,8	18	6,4

Concerning the influence of the type of occupation, and the smoking habits, we are, unfortunately, unable to say, as yet, because the figures at our disposal in this connection, are not complete.

THE COMPARISON OF THE PREVALENCE OF BRONCHO-PULMONARY CANCER IN IRAN WITH VARIOUS OTHER COUNTRIES

In Lebanon Ponthus observed only 1.58% of broncho_pulmonary cancer amongst the patients sent to the Institute of Radiology and Cancer.

Atallah, in the Surgery Department of th French University of Beirut, observed from 1950 to 1962 only 1.3% of broncho-pulmonary cancer in a total of 435 cancer cases.

These two figures are very close to our findings amongst patients at the Cancer Institute and other hospitals, and we belive that this is because they are in the same position as ours regarding the lack of proper facilities for the detection and control of broncho_pulmnary cancer.

At the Radiology Department of the American University of Beirut, Issa observed from 1959_1961 4.5% cases of broncho_pulmonary cancer, and at the Pathology Department of the same University Azar, in a total of 2845 cancer cases, observed from 1953_1960, found 4.8% of broncho_pulmonary cancer.

The American University's clincs seem to be in a better position, than the French University clinics, regarding facilities for chest surgery and biopsy because these last two figures are nearer the real frequency of broncho_pulmonary cancer observed in Lebanon.

Concerning the situation in Turkey, the figures published by ESER from the patients refered to the Cancer Institute of Istanbul, showed 7,2% of broncho-pulmonary carcinoma amongst the total cancer cases, wich is nearer to the European statistics.

In a new publication on more than 50,000 cancer cases gathered in different cities of Turkey, ESER found 5,8% of this type of cancer.

In Israel, the central statistic Department annouced the number of Broncho_pulmonary carcinoma is increasing. This type of cancer in Men, which used to be the second cancer in 1950, occupied first place in 1957.

In a new publication of Cancer Registry of Israel, concerning the new cases observed during the years 1960 and 1961, Ruth STEINITZ observed 5,34% of primary carcinoma of the lung and bronchus.

The general statistics published by Hochman, amongst the patients referred to the Radium Institute of Jerusalem, shows 11.6% of broncho-pulmonary cancer amongst the total cancer cases. Hochman observed, in adition, that the broncho-pulmonary cancer is most frequent in the European population of Israel, and less frequent in the local population.

In Pakistan, the statistics of the Cancer Institute of Pakistan gathered by Manzoor Zaidi during 1963 shows 5,3% of broncho-pulmonay cancers amongst 1138 cancer cases observed in this year. In East Pakistan S. F. HUQ observed 8,5% of this type of cancer amongst 3.650 cancer cases observed during four years (1960 to 1964) in the Department of Radiology of Chittagong Medical College Hospital.

The Broncho-pulmonary carcinomas In Iraq are seen in a prevalence of 3,7% on a total of 770 cancer cases observed during 1962 by SHIKARA in the Department of Radiology of Republic Hospital of Bagdad.

The detail of these figures are shown in table No. 27.

TABLE No. 27

BRONCHO-PULMONARY CANCERS

THE COMPARISON OF THE PREVALENCE IN IRAN

WITH NEIGHBOURING COUNTRIES

COUNTRIES	ZONE	INSTITUTIONS	%
TURKEY	ISTANBUL	Cancer Institute	7,20
	DIFF. CITY	Hospitals	5,80
LEBANON	BEIRUT	Institute of Radiology (F. F. M.)	1,58
		Departement of Radiology (A. U. B.)	4,50
		Departement of Pathology (A. U. B.)	4,80
ISRAEL	JERUSALEM	Radium Institute	11,60
	DIFF. CITY	Cancer Registry	5,34
IRAQ	BAGDAD	Dep. of Radiology, Republic Hosp.	3,70
PAKISTAN	CHITTAGONG	Radiology Dep., Med. College Hosp.	8,50
	KARACHI	Cancer Institute	5,30
IRAN	TEHERAN	Cancer Institute	2,30
		Departement of Pathology Med. School	0,90
		Private Pathology Laboratories	11,00

CONCLUSION

1) As in all countries, cancer occurs in Iran, and its various forms and their proportions, must be investigated to obtain the aspect of geopgraphic pathology of this disease.

2) There are no definite statistics in Iran, with regard to the new cases of cancer each year, nor the percentage of the population suffering from this disease. This is because no central body or department has been formed as yet for the collection and interpretation data on this subject.

3) For the last ten years Teheran's mortality rate due to cancer shows between 3 to 5 per cent of the total recorded deaths. As the same official report indicates that more than 25% of the total deaths, are due to unidentified causes or senility, and the death figures given for cancer are well below the average of other countries, we can conclude that an accurate rate of mortality due to cancer is also unavailable in Iran.

4) In order to obtain information withe regard to the ratio of the various forms of cancer and the assessment of the commonest forms in Iran, 10,000 identified cancer cases of different pathological laboratories of Teheran have been studied. The patients of these laboratories have been various, and from all social classes, which were sent to the pathologists by private practitioners, specialists, Teaching hospitals and the Cancer Institute of Medical School. We have, therefore, concluded that the results gathered are of value in indicating the trend and state of cancer in Iran.

5) These 10,000 cancer cases are diagnosed from 36,224 pathological specimens of tissues or organs. removed after biopsy, on surgical operations. The classification of the cancer cases are according to the methods proposed in 1955 by the World Health Organisation.

6) The five commonest groups of cancer have been studied in connection with their histological from, the ratio among the age groups, and all the factors which were considered relevant in connection with their prevalence in Iran.

7) Skin Cancer is the commonest form in Iran, consisting of 21.6% of the total cases. The sex ratio is a little more than 2/1. The frequency of this type of cancer in Iran appears to be in relation with the sun's rays, skin contact with contaminating clothes (in case of certain workers) and neglect of body and skin hygiene. Investigations of the patient's background has shown that labourers, farmers and working class men are afflicted by this type of cancer in greater proportions than the higher class people.

8) Cancer of the Cervix Uteri is the commonest form of cancer amongst women (22% of total cancer cases in women) and occupies the second place in the overall rating (9.88%). This also occurs predominantly in patients of the lower social class. A detailed investigation of the background of this class of patients has invariably shown early marriage, large number of pregnancies and general disregard for rules pertaining to the sanitation of the genital organs.

9) Cancer of the Lymphatic Organs, like other diseases of this system, is very widespread in Iran. The general statistics show that 8.46% of all cancer cases consist of malignant tumors of the lymph nods. It appears to predominate in men, but occurs in all age groups.

10) Cancer of the breast occupies a fourth place in the overall rating at a value of 6.34% Very few male patients have been diagnosed the sex ratio being 1/17. Investigations of the social state of patients has shown that breast cancer predominates among those of a higher standard of living. The background study of such patients indicates a small number of pregnancies and short period of breast feeding, This form of cancer is more common in middle age, but a few rare cases of girls in the group of ages 5-19 years have been diagnosed.

11) Cancer of the respiratory tracts is also common in Iran. From the total of 10,000 cases of cancer, 7.5% suffered from malignant tumors of these organs (4.06% cancer of larynx and 3.48% cancer of bronchus and lung).

Clinical investigation has shown that the percentage of the lung and bronchus cancer should be much higher than the above figure. An important number of patients consult pneumologists and chest surgeons

at such an advanced period of the disease that biopsy or surgical operation appears unnecessary or impossible. Such cases are diagnosed only by clinical and radiological examinations and do not, therefore, appear in our laboratory statistics. The greater number of these patients are relatively young.

Unfortunately, we have been unable to gather enough information with regard to the smoking habits, or the possibility of professional atmospheric contamination and air popollution in this group of patients.

12) At present a Cancer Control Programme is being developed in Iran, under the auspices of the Ministry of Health, School of Medicine, the Cancer Institute, and the Iranian Cancer Control Society.

Résumé

Une statistiques des résultats histologiques de 10,000 tumeurs malignes examinées aux trois groupes de laboratoires d'anatomie—pathologiques de Téhéran (Faculté de Médecine—Institut du cancer et laboratoires privés) est présentée et voici les résultats obtenus pour les cancers les plus frequents:

Sur le total de 10,000 tumeurs cancéreuses, le cancer de la peau est obseré en 21,6 % des cas et occupe la première plac dans la statistique générale. Ce cancer est beaucoups plus fréquent chez l'homme, surtout ceux de la classe socio—économique inférieure. Sa localisation principale est au niveau des régions exposées au soleil 67,5 % tête et cou) et la forme histologique malpighienne spinocellulaire est plus fréquente que la forme basocellulaire.

Le canecr du col de l'utérus occupe la deuxième place dans la statistique générale (9,88 %) et la première place (22 %) dans la statistique des cancers chez les femmes. Les formes histologiques malphighienne sont très fréquentes (93 %).

Les cancers primaires des ganglions lymphatiques s'observent dans 8,46 % des cas dans les deux sexes avec une prédominance dans le sex masculin. Environ 50 % des ganglions atteints étaient prélevés au niveau de la région du cou.

Le cancer du sein s'observe en 6,34 % des cas avec une répartition de 1 homme pour 17 femme. Ce cancer est beaucoups plus fréquent chez les femme de la classe supérieure de la société.

Le cancer du larynx occupe la cinquième place avec une fréquence de 3,48 % dans la statistiqe générale et une prédominance chez les hommes.

Les cancers broncho-pulmonaires s'observeut en 3,4 % des cas dans les deux sexes avec une prédominance du sex masculin.

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