GOVERNMENT OF CYPRUS

MINISTRY OF HEALTH

CYPRUS CANCER REGISTRY

(CyCR)

Report for the Triennial 1998-2000

Cyprus Cancer Registry

Report for the Triennial

1998-2000

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Special thanks are extended among others to: Dr Joe Hartford, Associate Director for Special Projects and Chief of Staff and through him the U.S. National Cancer Institute, Professor Laurence Freedman, Chairman Cancer Registry Steering Committee, Professor Michael Silbermann, Executive Director Middle East Cancer Consortium, Professor John Young, DrPH, CTR; Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, Georgia, Mr Steven D. Roffers, PA CTR; Clinical Instructor, National and International Training Director, Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, Georgia, Mr. Freddy Sitas, Director Cancer Research and Registry and Cyprus Anti-Cancer Society.

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Special thanks for their dedication and hard work are extended to Cancer Registry staff, Dr M. Boyiadzis Oncologist/Principal Investigator, Mrs Chr. Soteriou, Mrs K. Lysandridou and Mrs M. Clerides.

The editor

FOREWORD

We are all aware of the important role Cancer Registries can play in planning and managing cancer control activities. Planning and monitoring require knowledge about national and local cancer trends. Priority setting for cancer care requires knowledge about the cancer and prevalence of it's various types and sites. The efficacy of programmes and the effectiveness of treatment schemes require good quality Cancer Registry Data.

When the Middle East Cancer Consortium was established in 1998, one of its priorities was to promote high quality cancer registration within the participating countries. The aim was to achieve comparable data on cancer burden, which could be used for setting up and evaluating cancer control activities. MECC countries (Cyprus, Egypt, Israel, Jordan and Palestinian Authorities) are technically, scientifically and financially supported by the U.S. National Cancer Institute in order to achieve the goals of the consortium.

The Cyprus Cancer Registry (CyCR) was first set up in 1990. It was mainly a histopathologically based Cancer Registry of questionable, however, quality.

In 1998, when Cyprus joined MECC, the CyCR started functioning as a population based Cancer Registry, following internationally accepted standards and guidelines in relation to different aspects of Cancer Registry data.

This report provides information on Cancer incidence in Cyprus for the period 1998-2000. It is a useful tool for cancer control, health care planning and research. Researchers, clinicians, health administrators and anyone interested in the field of cancer can use it.

The CyCR report is the result of the efforts of the Cancer Registry staff. I would like to thank Dr Charitini Komodiki, Chief Health Officer, Head of the Registry and editor of the present report and commend upon the hard work and the dedication of the rest of the staff of the Registry, Dr Michael Boyiadzis Principal Investigator, Mrs Christiana Soteriou, for data analysis and for typing of the present edition and the two tumor registrars Mrs Koula Lysandridou and Mrs Maria Clerides.

Mrs C. Akkelidou
Minister of Health

Introduction

This is the first report of the Cyprus Cancer Registry (CyCR) produced under the aegis of the Middle East Cancer Consortium (MECC), which is funded by the US National Cancer Institute. This report provides information on cancer incidence for the period 1998-2000.

The main purpose of CyCR is to:

- Define the size of the cancer problem and trends of cancer incidence in Cyprus.
- Provide data on cancer, which can be used by politicians and health planners for the effective management and control of cancer at all levels of care.
- Provide information, which can be used by epidemiologists, researchers and professionals for further clinical studies and research.

The CyCR is a population-based cancer registry. It started functioning on a new basis in May 1998, when Cyprus joined the newly established Middle East Cancer Consortium. Five countries, Israel, Palestine (West Bank and Gaza), Egypt, Jordan and Cyprus participate in the consortium and cooperate under the US National Cancer Institute technical guidance and financial support. The countries involved agreed to collect information on cancer incidence, using a common set of basic data items, with standardised definitions and coding systems. At the same time common based quality control methods are used, allowing the evaluation of the accuracy of the collected information and consequently the comparison of the data among the five countries. In this way, the purposes of research, education and planning of health services are, among others, greatly assisted.

The CyCR replaced the old cancer registry, which started functioning in 1990 and which was relied exclusively on the analysis of the data of histopathological reports.

Since May 1998 the CyCR functions as a new unit of the Ministry of Health. It comes under the direct responsibility of the Chief Health Officer and the administrative responsibility of the Permanent Secretary of the Ministry of Health. The unit is staffed with one part time oncologist and three tumour registrars, all of whom have received proper training in purposely organised by MECC courses on the principles of cancer registration.

The main sources of collected information of the registry are: the histopathological reports, the cancer patient's files, and the cytology and the bone marrow registry for all government hospitals and the private clinics. To prevent multiple registrations of the same patient and to help identify individuals with multiple primary cancers, identity card number, name, address and other personal information is recorded for each patient. All personal data collected is strictly confidential and it is used only for the purposes of the registry.

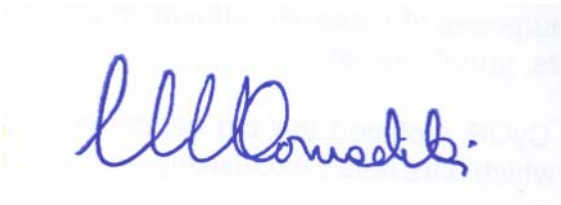
In order to measure the accuracy and the completeness of the Cyprus Cancer Registry, a case completeness and a data quality audit was conducted in 1999 files, by the two advisors to the MECC, Mr Steven Roffers, PA, CTR and Mr John L. Young, DrPH, CTR of the Rolling School of Public Health at Emory University, USA. The case finding audit shows that CyCR is estimated to be 88.33% complete for the year under study.

Part I of this publication provide demographic information and describe the procedure of the work and the data collection system. Difficulties, preventing the complete and accurate collection of data as well as suggestions to overcome the most serious of these problems are also included in this part.

The most common forms of cancers prevailing in Cyprus are described in part II. Information about the crude incidence and incidence rate adjusted to the World Standard Population is provided, allowing thus international comparisons.

It should be emphasized from the beginning that, because of the short time since the Registry's establishment and the small number of cases collected in each year, all data presented in this publication has to be interpreted and used very carefully. We are convinced that the data, which will be, included the next triennial Report 2001-2003 will offer more accurate and complete information the fluctuation of cancer cases each year will become smoother and a better reflection of the cancer situation in Cyprus will be given.

The CyCR is envisaged to be of assistance to politicians, health planners, epidemiologists, administrators, oncologists and researchers. We would be grateful for aim comments, which could help in preparing the subsequent editions of the Cyprus Cancer Registry Report.



Dr Charitini Komodiki
Project Director and
Chief Health Officer
Ministry of Health

Part I
GENERAL INFORMATION

Section A
Demographic Data

Presently the CyCR covers only the government controlled southern part of the island. This part of Cyprus is divided into five districts i.e. Lefkosia, Larnaka, Lemesos, Pafos and Ammochostos. The total population of the free part was in 1998, 682,900, in 1999, 690,500 and in 2000, 697,500. The biggest town in Cyprus is the capital Lefkosia with 277,900 inhabitants, followed by Lemesos (199,500 inhabitants), Larnaka (116,200), Pafos (66,100) and Ammochostos (37,800).
(Figure 1 and table 1)

The age and sex distribution of the population shows a gradual increase in the proportion of old-aged persons and a decrease in the proportion of children, indicating the aging process of the population. An increase has also been observed in the proportion of person's aged 45-64. The proportion of children below 15 had decreased to 21,5% while the proportion of old-aged persons 65 and over increased to 11,7%, as compared to 25,4% and 11,0% respectively in 1992 and 25,0% and 10,8% in 1982.
(Figure 2 and table 2)

Figure 1: Map of Cyprus

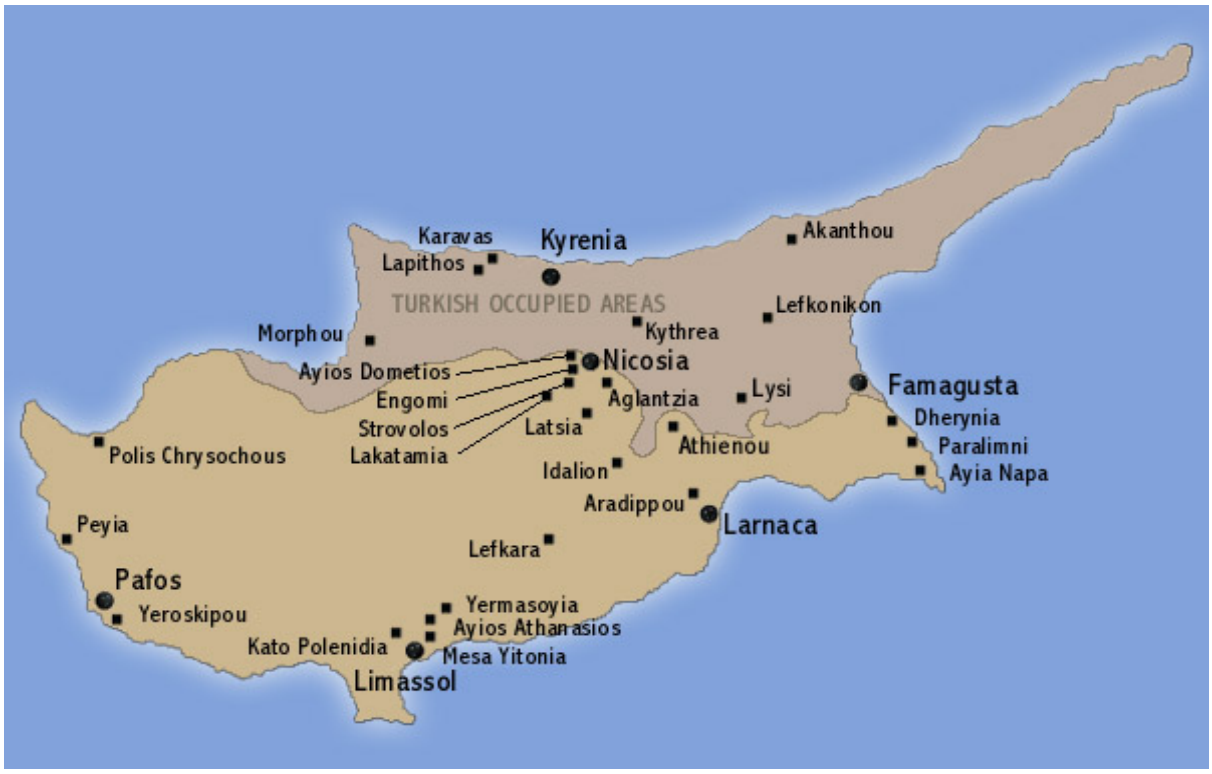


Table 1: End of the Year De Jure Population by District
(Urban-Rural areas) 1998-2000

(000´s)

District	1998			1999			2000		
	Total	**Urban**	**Rural**	**Total**	**Urban**	**Rural**	**Total**	**Urban**	**Rural**
Lefkosia	**273,4**	200,2	73,2	**275,8**	202,3	73,5	**277,9**	204,1	73,8
Ammochostos	**36,5**	0,0	36,5	**37,1**	0,0	37,1	**37,8**	0,0	37,8
Larnaka	**113,9**	69,5	44,4	**115,1**	70,3	44,8	**116,2**	71,1	45,1
Lemesos	**195,8**	155,7	40,1	**197,8**	157,5	40,3	**199,5**	159,2	40,3
Pafos	**63,3**	42,7	20,6	**64,7**	44,2	20,5	**66,1**	45,7	20,4
Total	**682,9**	**468,1**	**214,8**	**690,5**	**474,3**	**216,2**	**697,5**	**480,1**	**217,4**

Source: Demographic Report 2000
Department of Statistics and Research
Ministry of Finance

Figure 2: Population by Age and Sex, 2000

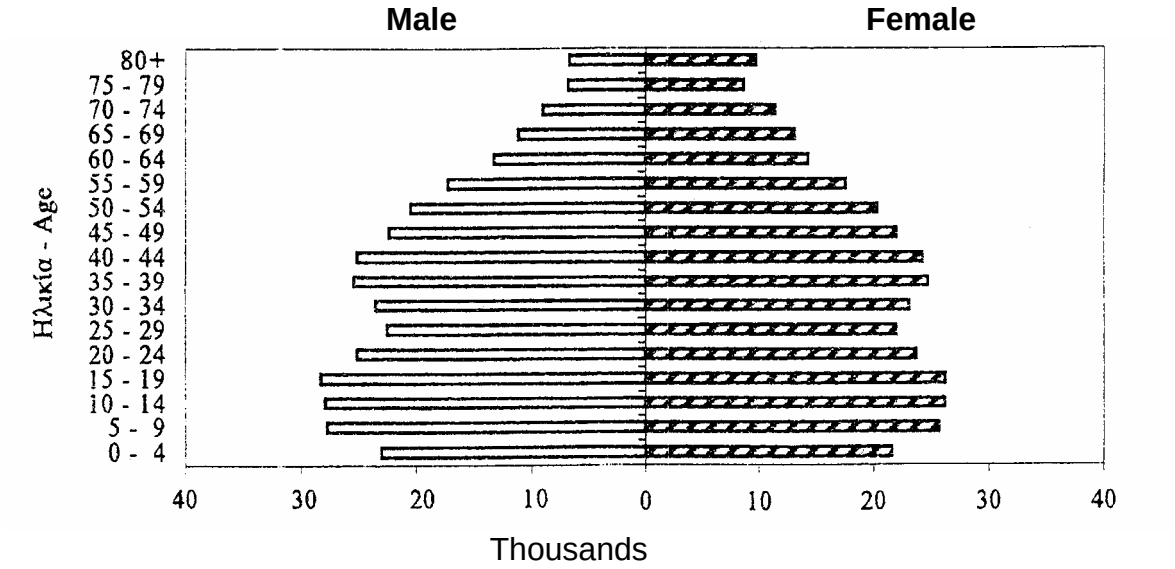


Table 2: Age and Sex Distribution of the Cyprus Population, 1998-2000

Age	1998			1999			2000		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
	000´s			000´s			000´s		
0 – 4	49,0	25,2	23,8	47,3	24,2	23,1	46,1	23,6	22,5
5 – 9	54,8	28,3	26,5	54,9	28,2	26,7	53,9	27,8	26,1
10 – 14	55,6	28,6	27,0	55,3	28,5	26,8	55,5	28,5	27,0
15 – 19	55,3	28,0	27,3	57,0	29,0	28,0	57,5	29,2	28,3
20 – 24	48,8	23,7	25,1	50,0	24,3	25,7	52,6	25,7	26,9
25 – 29	47,8	23,0	24,8	48,3	23,0	25,3	48,1	22,8	25,3
30 – 34	50,2	24,5	25,7	49,6	24,1	25,5	49,5	23,8	25,7
35 – 39	53,2	26,3	26,9	53,0	26,1	26,9	52,6	25,8	26,8
40 – 44	48,2	24,2	24,0	49,8	25,0	24,8	51,4	25,7	25,7
45 – 49	43,8	21,7	22,1	44,6	22,1	22,5	45,2	22,5	22,7
50 – 54	39,3	19,5	19,8	40,3	20,0	20,3	41,1	20,3	20,8
55 – 59	33,2	16,4	16,8	34,8	17,2	17,6	36,5	18,1	18,4
60 – 64	27,7	13,3	14,4	28,3	13,7	14,6	28,9	14,0	14,9
65 – 69	23,9	10,8	13,1	24,2	11,1	13,1	24,8	11,5	13,3
70 – 74	20,1	9,0	11,1	20,4	9,1	11,3	20,7	9,2	11,5
75 +	32,0	13,8	18,2	32,7	14,1	18,6	33,2	14,2	19,0
TOTAL	**628,9**	**336,3**	**346,6**	**690,5**	**339,7**	**350,8**	**697,6**	**342,7**	**354,9**

Source Demographic Report, 2000
Department of Statistics and Research
Ministry of Finance

Section B
Procedure of the Work of the CyCR

The Cyprus Cancer Registry (CyCR) is a population-based cancer registry covering the non-occupied part of Cyprus. Two tumor registrars employed by the Ministry of Health with the financial support of the Consortium collect the data from the various sources. The main sources of information are the histopathological reports collected from all the histopathological laboratories in the government (one laboratory) and in the private sector (seven laboratories). Data also is collected from:

- The cytology registry of the Lefkosia General Hospital.
- The bone marrow registry of the Lefkosia Makarios Hospital.
- The cancer patients´ hospital records from the two Oncological departments i.e. the Lefkosia General Hospital and the Bank of Cyprus Oncology Centre.

Details about the distribution of cases found on the basis of the various sources are shown in table 3.

Table 3: Cases Found and Main Sources of Information, 1998-2000

	BASIS OF DIAGNOSIS	1998	1999	2000
0	Death Certificate Only	0	0	0
1	Clinical only	15	6	7
2	Clin. Invest. / Ult.Sound/X-ray	26	40	36
3	Exploratory Surgery/Autopsy	16	5	3
4	Specific Biochem/Immuno test	7	4	8
5	Cytology/Haematology	90	91	94
6	Histology of Metastases	2	10	53
7	Histology of Primary	1398	1416	1479
8	Autopsy with Histology	1	0	0
9	Unknown	17	5	8
	TOTAL	**1572**	**1577**	**1688**

Based on the above-mentioned sources, the patient's hospital record is identified, the information is extracted and the two tumors registrars complete the cancer statistical form. The information elucidated from all sources then matched together and all duplicated cases are excluded.

During the period 1998-2000, 160 doctors, from the Government and the private sector diagnosed, for a first time cancer cases and notify their cases to Cancer Registry. The geographical distribution of the registering doctors is shown in table 4.

Table 4: Number and Geographical Distribution of Private Doctors Notifying Cancer Cases During the Period 1998-2000

District	No. of Doctors
Lefkosia	70
Lemesos	60
Larnaka	15
Pafos	10
Ammochostos	5
Total	**160**

During the process of their work the registrars are facing several problems among which the most important are the following:

- Absence of the patient's identity card number on the patient's hospital record and on every other medical document, which prevents the identification of the patient.

- The incomplete data in the patients' hospital file which does not allow the complete and accurate completion of the cancer registry statistical form. An assessment to estimate the extend of the problem of missing data has been made (table 5) which showed that the grade of tumour differentiation is the most commonly missed type of data.

- The absence of computerization of the patient's record filing system of the Lefkosia General Hospital.

- The incomplete data in the death certificates that prevents death certificates information to be used and link with cancer registry data.

Table 5: Assessment of the Missing Data from Cancer Patients Forms, 1998-2000

ITEM	1998		1999		2000	
	No. of cases	%	No. of cases	%	No. of cases	%
Sex	0	0	0	0	0	0
Age	57	3,6	26	1,6	22	1,3
Residence	102	6,5	81	5,1	88	5,2
Incidence Date	0	0	0	0	0	0
Basis of Diagnosis	17	1,1	5	0,3	8	0,5
Primary Site	0	0	0	0	0	0
Histology Type (unclassified tumor)	8	0,5	42	2,7	64	3,8
Behavior	0	0	0	0	0	0
Summary Stage	20	1,3	66	4,2	98	5,8
Date of Notification	0	0	0	0	0	0

The data analysis shows that cancers are histologically verified in 89% of the cases. This is comparable with other European countries histological verification. (Table 6)

Table 6: Percentage of Registration with Histological Verification in Cyprus as Compared with Other European Countries

Site	Cyprus	England	France	Spain	Denmark
All Cancers*	**89**	69	97	83	92
Breast	**97**	74	97	87	94
Melanoma	**96**	84	98	90	99
Lung	**61**	67	97	85	93
Colon	**97**	76	98	85	94
Oesophagus	**95**	80	98	88	99

*Excluding non-melanoma skin cancers

The primary site of a cancer is unknown in only 1,7% of the cases, which is low but it is comparable with some other European countries as it can be seen in table 7.

Table 7: Cases (%) with Primary Site Unknown in Cyprus Compared with Other European Registries

Registry	Males (%)	Females (%)
Cyprus	**1,5**	**2,2**
Spain, Basque Country	7,5	8,0
UK, West Midlands	5,6	5,9
UK, Scotland	4,9	5,6
Netherlands, Eindhoven	4,7	5,1
France, Bas Rhin	4,5	4,8
Norway	3,7	4,3
Czech Republic	3,4	4,3
Switzerland, Basle	3,8	3,8
Sweden	3,4	3,9
Republic of Ireland	3,8	3,5
Denmark	3,3	3,7
Finland	2,3	3,4
Italy, Florence	2,6	2,7
Iceland	2,3	2,9

Section C
Problems/Recommendations

To face the various problems and improve the situation, various activities need to be undertaken by the Ministry of Health, among which the most important are the following:

1. Hospital records should be:
   - Fully completed with all necessary information by hospital staff.
   - Computerized.
   - Stored in a proper place so that they are readily available, accessible, and not mislaid.
   - Avoid giving to the patients.
   - Ensured that key data items i.e. stage of disease, occupation and permanent address are routinely and accurately collected.
2. Medical records departments should be administratively controlled via computerization of all patient visits and the discharge diagnosis of the patients should be coded according to the International Classification of Diseases, Tenth Revision (ICD-10).
3. Haematology, bone marrow and cytology records should be computerized.
4. Ways to include radiology department information should be found (perhaps by use of radiology and radiotherapy modules of the system described in 2 above).
5. Pathology forms should be improved by including more information. At the same time efforts should be made by histopathologists to report in line with the ICD-0-10 cancers classification.
6. Death certificates information need to be complete and accurate. Physicians need to be trained and sensitised to complete accurately death certificates forms. Statistical Department staff needs also to be trained in the proper classification of deaths.

Section D
Layout of the Report

In the subsequent sections covering the various most common forms of cancers types, a model layout has been adopted as follows:

- Summary
- Age Profile
- Morphology
- Data Quality
- Comment

Summary

A textual summary precedes the main summary table, which details incidence, data quality by sex and year for the cancer in question. A technical definition of the terms used is provided below.

Incident Case	A new cancer case diagnosed in the year being studied.
Crude Rate	The number of cases per head of population is reported as a rate per 100,000 per year.
Cumulative Risk	The lifetime (0-74 years) risk of developing/dying from the cancer is cited, expressed as a percentage.
World Age Standardised Rate (WASR)	A rate used to permit international comparisons by adjusting for differences in national population age structures by adopting a national standard population, reported as a rate per 100,000.
% of all cancers	The contribution of that specific cancer to the total number of patients with cancer.
% Microscopically Verified (%MV)	The gold standard for the registration of a new case of cancer is to have had a specimen confirmed as a malignant tumour by examination by a pathologist under a microscope. Not every case will necessarily require, microscopic verification, but the greater the proportion, the better the diagnostic confidence. However, too high a proportion is also an indication that the clinical-only cases are not reported to the registry.

Age Profile

The age specific counts and rates are reported in graphical form, with comments where appropriate.

Morphology

The morphology (i.e. the type of tumour) for the cancer is reported, where appropriate, as this can be an indicator of outcome.

PART II

All Cancer Statistics
ICD-O, C00-C80

Over the period 1998-2000, on average 1600 cancer cases per year have been registered. Prostate, bladder and bronchus/lung was the most common for males (figures 3 and table 8) while breast, colon and corpus uteri were the most common type of cancers in females (figure 4 and table 9).
*Non-melanoma skin cancers excluded

FIGURE 3: Most Common Male Cancers (%), 1998-2000

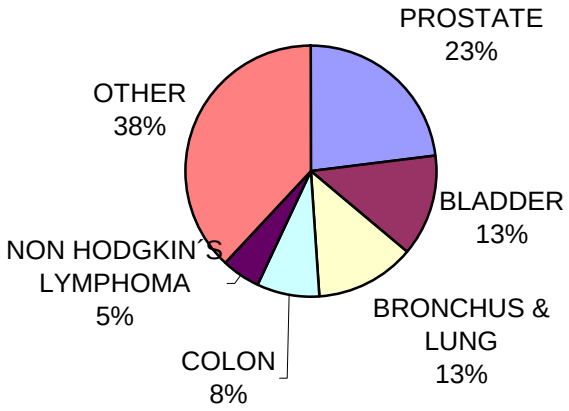


FIGURE 4: Most Common Female Cancers (%), 1998-2000

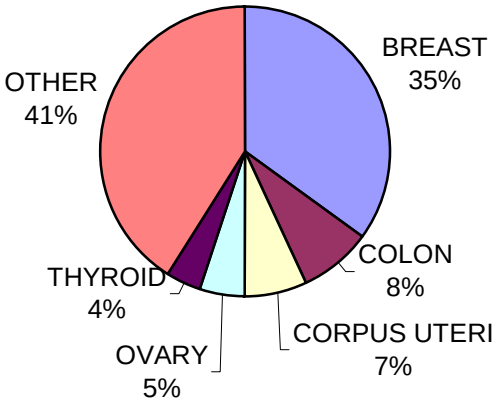


Table 8: Ten Most Common Forms of Cancer for Male, 1998-2000

	Cancer Site	No. of Cases	%
1.	Prostate	545	22,9
2.	Bladder	306	12,9
3.	Trachea, Bronchus, Lung	302	12,7
4.	Colon	175	7,4
5.	Non-Hodgkin Lymphoma	131	5,5
6.	Leukemia	106	4,5
7.	Rectum	95	4,0
8.	Stomach	80	3,4
9.	Brain, Nervous System	64	2,7
10.	Kidney	51	2,1
11.	Others	519	21,9
	TOTAL	**2374**	**100,0**

Table 9: Ten Most Common Forms of Cancer for Female, 1998-2000

	Cancer Site	No. of Cases	%
1.	Breast	794	34,9
2.	Colon	189	8,3
3.	Corpus Uteri	166	7,3
4.	Ovary	106	4,7
5.	Thyroid	104	4,6
6.	Non-Hodgkin Lymphoma	95	4,2
7.	Rectum	78	3,4
8.	Leukemia	69	3,0
9.	Trachea, Bronchus, Lung	69	3,0
10.	Stomach	66	2,9
11.	Others	540	23,7
	TOTAL	**2276**	**100,0**

Figure 5: Ten Most Common Forms of Cancer for Male by District, 1998-2000

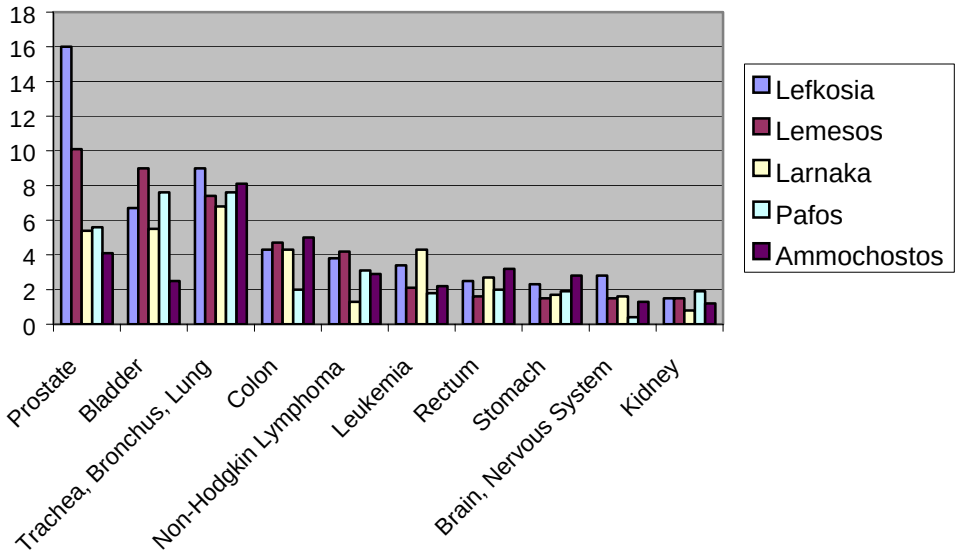
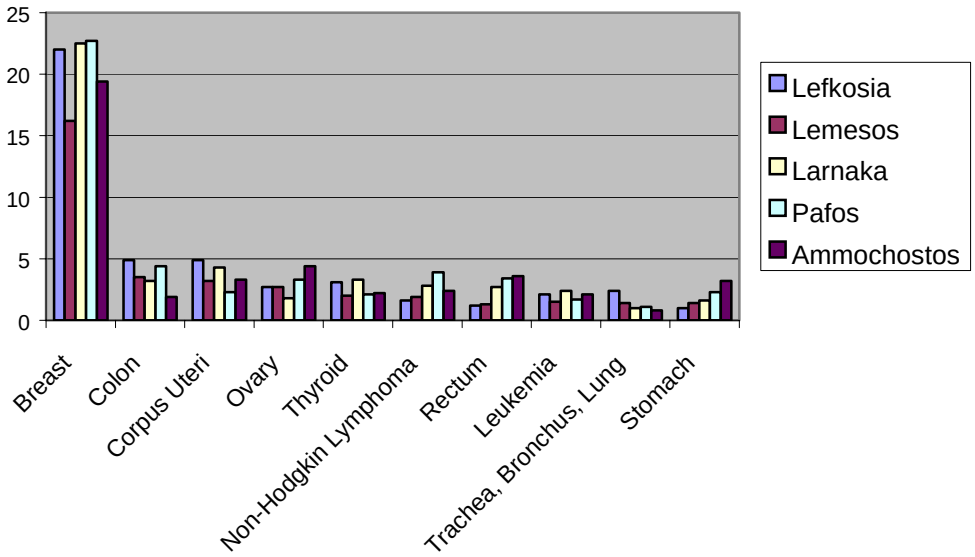


Figure 6: Ten Most Common Forms of Cancer for Female by District, 1998-2000



The total number of new cancer cases registered in Cyprus in the year 1998, 1999, 2000 by site and sex is shown in table 10.

Table 10: Total Number of New Cancer Cases in Cyprus 1998-2000 by Site and Gender

CANCER SITE	1998			1999			2000		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
LIP	0	0	**0**	3	0	**3**	4	0	**4**
TONGUE	2	2	**4**	0	4	**4**	5	1	**6**
MOUTH	4	2	**6**	4	3	**7**	3	1	**4**
SALIVARY GLAND	2	3	**5**	1	5	**6**	2	0	**2**
TONSIL	1	0	**1**	0	0	**0**	2	0	**2**
OTHER OROPHARYNX	0	0	**0**	0	0	**0**	1	0	**1**
NASOPHARYNX	1	1	**2**	3	2	**5**	1	1	**2**
HYPOPHARYNX	1	0	**1**	0	0	**0**	0	0	**0**
PHARYNX UNSPECIFIED	0	0	**0**	2	0	**2**	0	1	**1**
OESOPHAGUS	4	3	**7**	6	0	**6**	6	2	**8**
STOMACH	25	25	**50**	28	18	**46**	27	23	**50**
SMALL INTESTINE	2	0	**2**	3	2	**5**	3	0	**3**
COLON	58	58	**116**	59	58	**117**	58	73	**131**
RECTUM	25	19	**44**	32	25	**57**	38	34	**72**
ANUS	1	1	**2**	2	2	**4**	0	0	**0**
LIVER	12	5	**17**	16	6	**22**	16	5	**21**
GALLBLADDER etc	9	13	**22**	12	16	**28**	6	11	**17**
PANCREAS	19	10	**29**	17	11	**28**	18	12	**30**
NOSE, SINUSES etc	3	0	**3**	3	0	**3**	0	0	**0**
LARYNX	18	1	**19**	12	0	**12**	10	0	**10**
BRONCHUS AND LUNG	87	18	**105**	104	23	**127**	111	28	**139**
OTHER THORACIC ORGANS	1	2	**3**	2	3	**5**	0	1	**1**
BONE	10	3	**13**	5	3	**8**	3	2	**5**
MELANOMA OF SKIN	9	17	**26**	10	11	**21**	12	15	**27**
MESOTHELIOMA	2	1	**3**	1	2	**3**	3	1	**4**
KAPOSI´S SARCOMA	2	1	**3**	3	0	**3**	3	1	**4**
CONNECTIVE, SOFT TISSUE	9	10	**19**	7	6	**13**	2	5	**7**
BREAST	2	265	**267**	6	268	**274**	2	261	**263**
VULVA	0	10	**10**	0	5	**5**	0	4	**4**
VAGINA	0	0	**0**	0	2	**2**	0	3	**3**
CERVIX UTERI	0	21	**21**	0	23	**23**	0	14	**14**
CORPUS UTERI	0	49	**49**	0	47	**47**	0	70	**70**
UTERUS UNSPECIFIED	0	5	**5**	0	0	**0**	0	1	**1**
OVARY	0	45	**45**	0	32	**32**	0	29	**29**
OTHER FEMALE GENITAL ORGANS	0	0	**0**	0	0	**0**	0	0	**0**
PLACENTA	0	0	**0**	0	0	**0**	0	0	**0**
PENIS	5	0	**5**	3	0	**3**	3	0	**3**
PROSTATE	147	0	**147**	155	0	**155**	243	0	**243**
TESTIS	10	0	**10**	15	0	**15**	14	0	**14**
OTHER MALE GENITAL ORGANS	0	0	**0**	1	0	**1**	0	0	**0**
KIDNEY	20	7	**27**	14	16	**30**	17	12	**29**
RENAL PELVIS	2	1	**3**	1	0	**1**	1	0	**1**
URETER	1	0	**1**	0	0	**0**	0	0	**0**
BLADDER	103	27	**130**	98	20	**118**	105	12	**117**
OTHER URINARY ORGANS	0	0	**0**	0	0	**0**	0	1	**1**
EYE	1	3	**4**	0	0	**0**	3	1	**4**
BRAIN, NERVOUS SYSTEM	23	15	**38**	17	16	**33**	24	19	**43**
THYROID	10	40	**50**	7	32	**39**	10	32	**42**
ADRENAL GLAND	2	0	**2**	0	0	**0**	2	2	**4**
OTHER ENDOCRINE	0	0	**0**	0	1	**1**	0	0	**0**
HODGKIN´S DISEASE	8	10	**18**	8	10	**18**	9	9	**18**
NON-HODGKIN´S LYMPHOMA	46	30	**76**	45	36	**81**	40	29	**69**
IMMUNOPROLIFERATIVE DIS.	0	0	**0**	0	0	**0**	0	0	**0**
MULTIPLE MYELOMA	13	7	**20**	13	7	**20**	6	4	**10**
LYMPHOID LEUKEMIA	21	15	**36**	22	13	**35**	18	9	**27**
MYELOID LEUKEMIA	10	11	**21**	21	10	**31**	12	11	**23**
LEUKEMIA UNSPECIFIED	0	0	**0**	1	0	**1**	1	0	**1**
OTHER AND UNSPECIFIED	8	12	**20**	13	8	**21**	16	22	**38**
ALL SITES	**739**	**768**	**1507**	**775**	**746**	**1521**	**860**	**762**	**1622**

* Foreigners are not included in the total number of cancer cases

On average, 60 cancer cases each year are found among foreigners either permanently living in Cyprus or accidentally found in people visiting Cyprus. The most commonly found cancer among foreigners was the female breast cancer. (Table 11)

Table 11: Number of Cancer Cases for Foreigners in Cyprus, by Site and Gender 1998-2000

CANCER SITE	1998			1999			2000		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
TONGUE	1	1	**2**	0	0	**0**	0	1	**1**
PHARYNX UNSPECIFIED	0	0	**0**	0	2	**2**	0	0	**0**
OESOPHAGUS	0	0	**0**	0	0	**0**	0	1	**1**
STOMACH	1	2	**3**	0	0	**0**	2	0	**2**
SMALL INTESTINE	0	0	**0**	0	0	**0**	1	0	**1**
COLON	4	1	**5**	5	3	**8**	4	1	**5**
RECTUM	3	0	**3**	0	0	**0**	3	1	**4**
LIVER	0	0	**0**	1	0	**1**	0	0	**0**
LARYNX	1	0	**1**	1	0	**1**	0	2	**2**
BRONCHUS AND LUNG	2	1	**3**	2	2	**4**	5	0	**5**
BONE	0	0	**0**	0	0	**0**	0	1	**1**
MELANOMA OF SKIN	0	1	**1**	1	0	**1**	0	1	**1**
KAPOSI´S SARCOMA	0	0	**0**	0	0	**0**	1	0	**1**
CONNECTIVE, SOFT TISSUE	1	1	**2**	0	1	**1**	0	0	**0**
BREAST	0	12	**12**	1	15	**16**	0	13	**13**
VULVA	0	2	**2**	0	0	**0**	0	0	**0**
CERVIX UTERI	0	3	**3**	0	3	**3**	0	1	**1**
CORPUS UTERI	0	2	**2**	0	0	**0**	0	1	**1**
OVARY	0	2	**2**	0	4	**4**	0	3	**3**
PROSTATE	10	0	**10**	2	0	**2**	6	0	**6**
TESTIS	0	0	**0**	0	0	**0**	1	0	**1**
KIDNEY	2	0	**2**	0	0	**0**	2	0	**2**
BLADDER	4	3	**7**	3	1	**4**	4	1	**5**
OTHER URINARY ORGANS	1	0	**1**	0	0	**0**	0	0	**0**
BRAIN, NERVOUS SYSTEM	0	1	**1**	0	1	**1**	0	1	**1**
THYROID	1	0	**1**	0	0	**0**	0	1	**1**
HODGKIN´S DISEASE	0	0	**0**	0	2	**2**	0	2	**2**
NON-HODGKIN´S LYMPHOMA	0	1	**1**	1	2	**3**	1	0	**1**
MYELOID LEUKEMIA	0	0	**0**	0	1	**1**	0	0	**0**
OTHER AND UNSPECIFIED	0	0	**0**	0	1	**1**	1	0	**1**
ALL SITES	**31**	**33**	**64**	**17**	**38**	**55**	**31**	**31**	**62**

The Crude Rate (per 100,000 population) in males in the year 2000 was about 250 cases and in females were about 212 cases. In the year 2000, 860 (53%) new cancer cases in males and 762 (47%) new cancer cases were registered. (Table 12)

Table 12: Summary Statistics all Cancers, 1998-2000

YEAR INCIDENCE	MALES			FEMALES		
	1998	1999	2000	1998	1999	2000
Incident cases	739	775	860	768	746	762
Crude Rate (per 100,000)	219,9	228,3	250,4	221,7	212,8	212,3
WASR (per 100,000)	168,0	172,4	188,5	166,8	161,9	156,4
% of all cancers	49,0	51,0	53,0	51,0	49,0	47,0

WASR = Rates standardised for age to the World Standard Population

Age Profile

Cancers in younger age groups are more commonly found in younger females than in younger males, while in old age – over 65 years of age – are more commonly found in males. (Table 13)

Table 13: Average Number of New Cancer Cases (%) by Age Group and Sex, 1998-2000

Age	Males	(%) Males	Females	(%) Females
0-44	257	11	394	17
45-64	656	28	894	39
65+	1398	59	959	42
Unknown age	63	2	29	2
Total	**2374**	**100**	**2276**	**100**

Sex specific cancers were largely responsible for this differing pattern in age distribution between the sexes. Age specific incidence rates (ASIR) were highest in the oldest age group (75+ years). Female rates were higher in the 25-65 year age group again reflecting the influence of sex specific cancers (especially breast and cervix). The median age at diagnosis was 70 years for males and 65 for females.

The age distribution of new cancer cases 1998-2000 is shown in table 14 and figure 5. Table 15 and figure 6 shows the average annual age specific incidences rates of new cancer cases by five year age-group and sex for the year 1998, while tables 16, 17 and figures 7, 8, show the average annual age specific incidence rate for each year 1999 and 2000.

Obviously cancer is more common in the old-aged groups i.e. over the age of 60 years.

FIGURE 7: Age Distribution of New Cancer Cases all Cancers (excluding NMS), 1998-2000

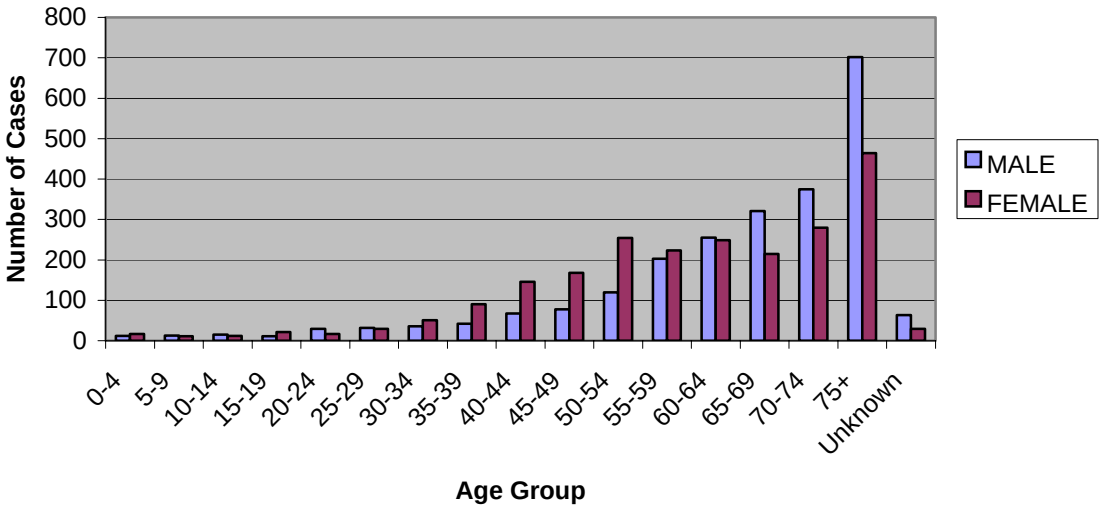


Table 14: Age Distribution of New Cancer Cases, All Cancers (excluding NMS), 1998-2000

Age Group	Male	Female
0-4	12	17
5-9	13	11
10-14	15	12
15-19	11	21
20-24	29	17
25-29	32	29
30-34	36	51
35-39	42	90
40-44	67	146
45-49	78	168
50-54	120	254
55-59	203	223
60-64	255	249
65-69	321	215
70-74	375	280
75+	702	464
Unknown	63	29
Total	**2374**	**2276**

Table 15: Average Annual Age Specific Incidence Rates (per 100,000), 1998 All Cancers (excluding NMS)

AGE GROUP	MALE	FEMALE
0-4	20	29
5-9	14	15
10-14	17	4
15-19	11	22
20-24	30	16
25-29	48	44
30-34	49	70
35-39	53	115
40-44	87	229
45-49	134	235
50-54	154	374
55-59	372	441
60-64	504	584
65-69	908	581
70-74	1390	865
75+	1574	863

FIGURE 8: Average Annual Age Specific Incidence Rates (per 100,000), 1998 All Cancers (excluding NMs)

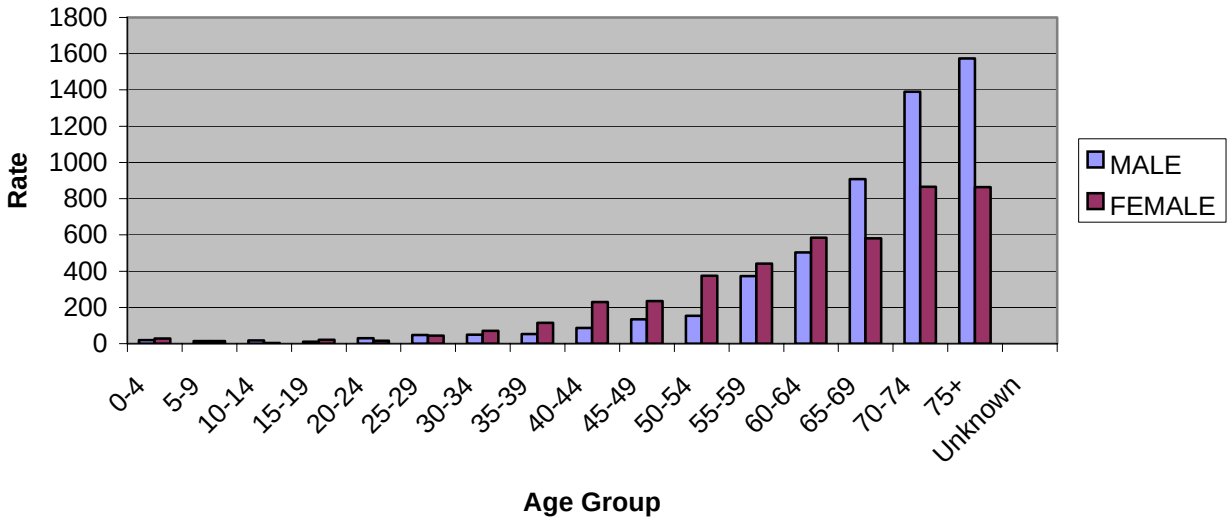


Table 16: Average Annual Age Specific Incidence Rates (per 100,000), 1999 All Cancers (excluding NMS)

AGE GROUP	MALE	FEMALE
0-4	4	35
5-9	21	19
10-14	25	34
15-19	14	29
20-24	29	31
25-29	44	36
30-34	54	82
35-39	50	123
40-44	96	206
45-49	118	245
50-54	225	424
55-59	367	347
60-64	643	507
65-69	893	504
70-74	1287	930
75+	1654	759

FIGURE 9: Average Annual Age Specific Incidence Rates (per 100,000), 1999 All Cancers (excluding NMs)

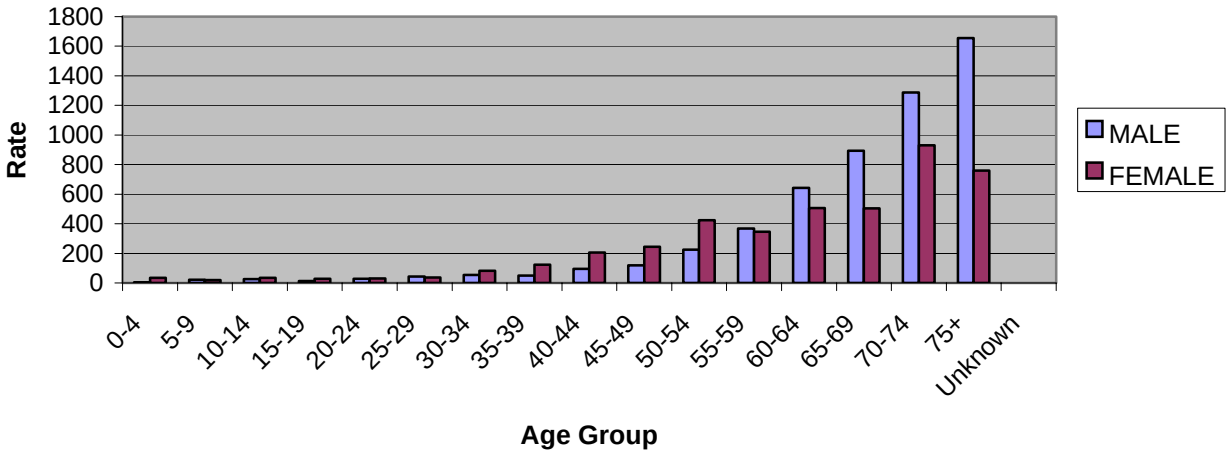
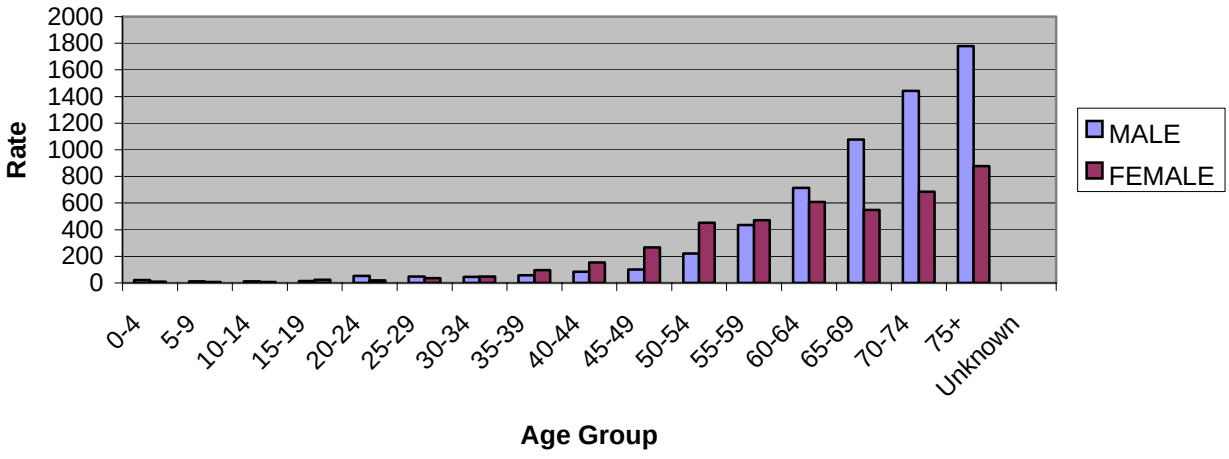


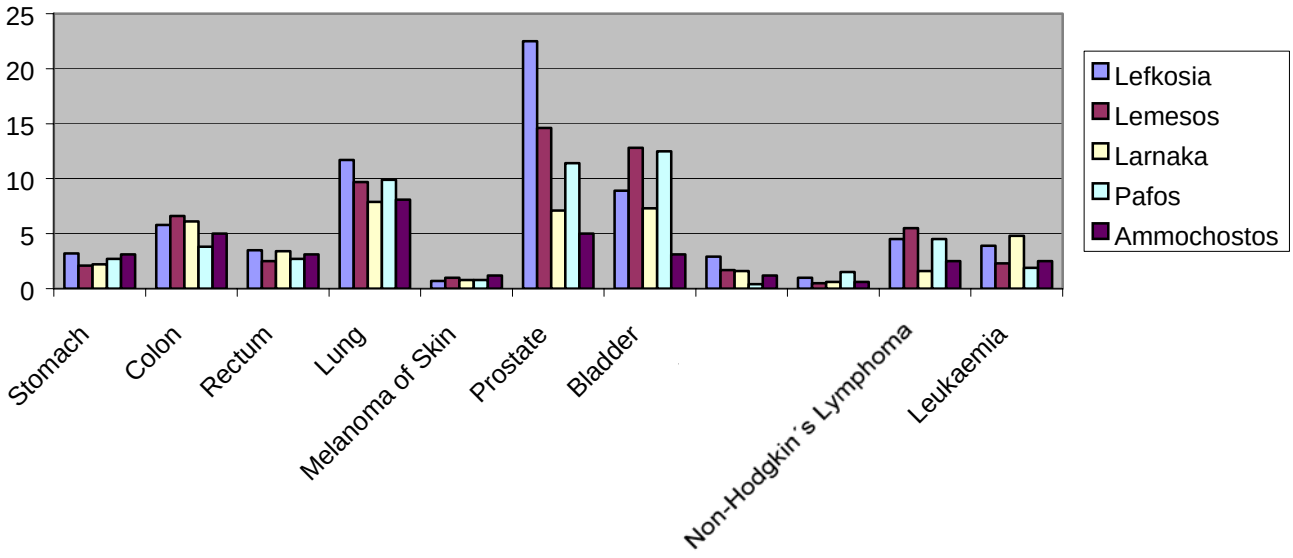
Table 17: Average Annual Age Specific Incidence Rates (per 100,000), 2000 All Cancers (excluding NMS)

AGE GROUP	MALE	FEMALE
0-4	25	9
5-9	11	8
10-14	11	7
15-19	14	25
20-24	54	19
25-29	48	36
30-34	46	47
35-39	58	97
40-44	85	155
45-49	102	268
50-54	221	451
55-59	436	472
60-64	713	609
65-69	1076	548
70-74	1443	686
75+	1778	877

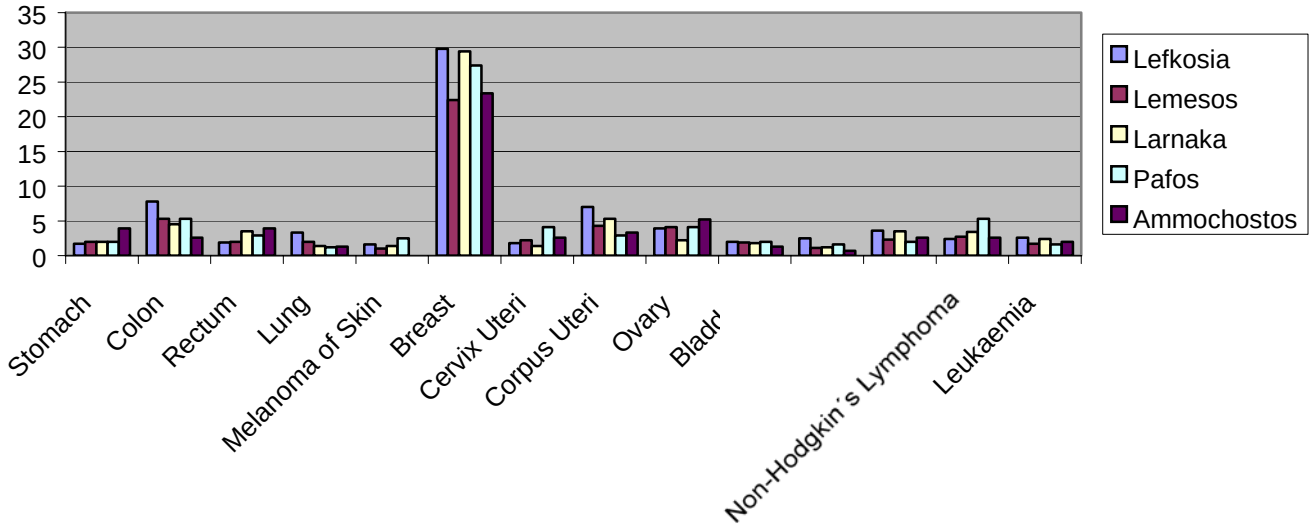
FIGURE 10: Average Annual Age Specific Incidence Rates (per 100,000), 2000 All Cancers (excluding NMs)



Male by District (Grude Rate)
1998-2000



Female by District (Crude Rate)
1998-2000



Childhood Cancer Ages 0-14

- On average, 26 childhood cancers were registered per year.

In the age group 0-14 years, 80 children have been diagnosed with cancer in the three year period 1998-2000, representing the 1,7% of the total number of cases (table 18). Most common form of cancer in this age group in both sexes was Lymphoid Leukemia.

Table 18: The Most Frequent Types of Cancer Cases in the Age Group 0-14 years by Sex in Cyprus, 1998-2000

CANCER SITE	0 - 4			5 - 9			10 - 14		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
COLON	0	0	**0**	0	0	**0**	0	1	**1**
LIVER	1	0	**1**	1	0	**1**	0	0	**0**
NOSE, SINUSES etc	0	0	**0**	0	0	**0**	1	0	**1**
BRONCHUS AND LUNG	0	0	**0**	0	0	**0**	1	0	**1**
BONE	0	0	**0**	0	0	**0**	2	2	**4**
CONNECTIVE, SOFT TISSUE	0	3	**3**	0	1	**1**	0	0	**0**
OVARY	0	0	**0**	0	0	**0**	0	1	**1**
KIDNEY	2	2	**4**	0	2	**2**	0	0	**0**
BRAIN, NERVOUS SYSTEM	3	4	**7**	1	2	**3**	4	3	**7**
THYROID	0	0	**0**	0	0	**0**	0	1	**1**
ADRENAL GLAND	2	0	**2**	0	1	**1**	0	0	**0**
OTHER ENDOCRINE	0	1	**1**	0	0	**0**	0	0	**0**
HODGKIN´S DISEASE	0	0	**0**	0	0	**0**	1	2	**3**
NON-HODGKIN´S LYMPHOMA	0	0	**0**	2	1	**3**	3	0	**3**
LYMPHOID LEUKEMIA	1	6	**7**	6	3	**9**	2	1	**3**
MYELOID LEUKEMIA	2	1	**3**	3	1	**4**	1	1	**2**
OTHER AND UNSPECIFIED	1	0	**1**	0	0	**0**	0	0	**0**
ALL SITES	**12**	**17**	**29**	**13**	**11**	**24**	**15**	**12**	**27**

Tables 19-21 show the Age Specific Incidence Rate (per 100,000 population) of Childhood Cancer for the years 1998, 1999 and 2000.

Table 19: Age Specific Incidence Rate per 100,000 population (ASIR) of Childhood Cancer Cases, 1998

Age Group	Male		Female		Total	
	No	ASIR	No.	ASIR	No.	ASIR
0-4	5	19,8	7	29,4	12	24,5
5-9	4	14,1	4	15,1	8	14,6
10-14	5	17,5	1	3,7	6	10,8

Table 20: Age Specific Incidence Rate per 100,000 population (ASIR) of Childhood Cancer Cases, 1999

Age Group	Male		Female		Total	
	No	ASIR	No.	ASIR	No.	ASIR
0-4	1	4,1	8	34,6	9	19,0
5-9	6	21,3	5	18,7	11	20,1
10-14	7	24,6	9	33,6	16	29,0

Table 21: Age Specific Incidence Rate per 100,000 population (ASIR) of Childhood Cancer Cases, 2000

Age Group	Male		Female		Total	
	No	ASIR	No.	ASIR	No.	ASIR
0-4	6	25,4	2	8,9	8	20,6
5-9	3	10,8	2	7,7	5	9,3
10-14	3	10,5	2	7,4	5	9,0

Cancer of the Female Breast

- On average, 264 female breast cancers were registered per year.
- Breast cancer accounted for 35% of all new cancer cases diagnosed in females.
- Two-thirds were above 50 years of age.

264 female breast cancer cases on average are diagnosed each year. Breast cancer was the most common form of cancer in females. It is rarely occurred in males (2 cases in 1998, 6 in 1999 and 2 in 2000). Breast cancer in females accounted for around 35% of all new cancer cases in females.

Caution should, however, be exercised when interpreting trends for such a limited time period, as numbers of cases will naturally fluctuate from year to year.

Table 22: Summary Statistics

YEAR INCIDENCE	1998	1999	2000
Incident cases	265	268	261
Crude Rate (per 100,000)	76,5	76,4	73,4
WASR (per 100,000)	59,4	58,6	56,0
% of Female Cancers	34,6	36,0	34,3
% Microscopically Verified	97,0	98,9	99,2

Cumulative Risk 1998-2000 (0-74) (%) Female 2,20

WASR = Rates standardised for age to the world standard population.

Age Profile

Almost two-thirds of females diagnosed with breast cancer during 1998-2000 were 50 years of age and over. The peak in middle ages around menopause is a common pattern.

Figure 9 and table 23 show the age distribution and the ASIR of new cancer cases respectively. Both demonstrate the typical picture of increasing rates of disease with increasing age.

FIGURE 11: Age Distribution of Female Breast Cancer Cases, 1998-2000

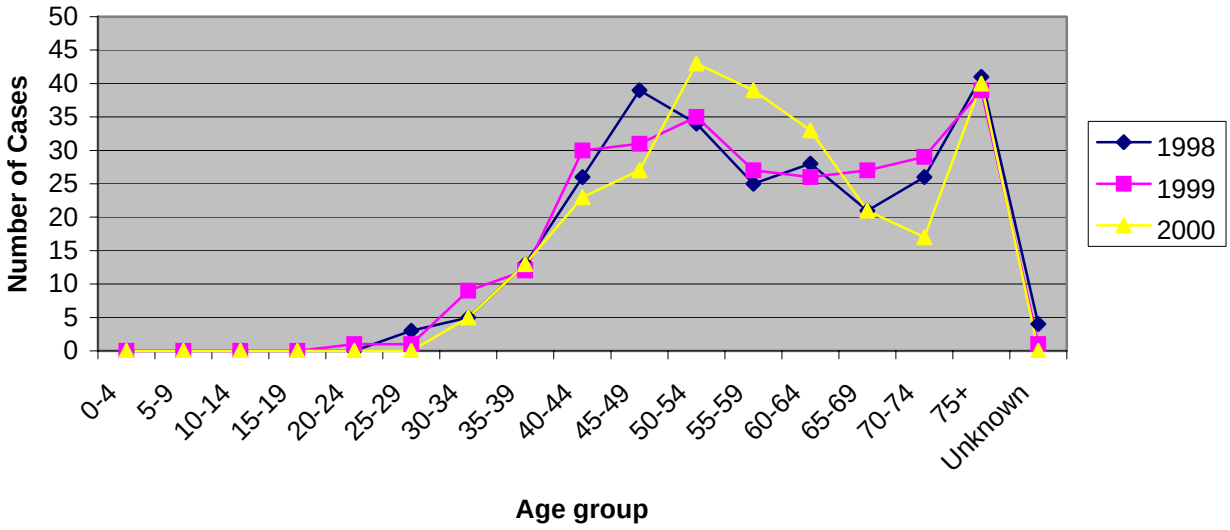


Table 23: Age Specific Incidence Rate per 100,000 populations (ASIR) Female Breast Cancer Cases, 1998-2000

Age Group	1998		1999		2000	
	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0
20-24	0	0,0	1	3,9	0	0,0
25-29	3	12,1	1	4,0	0	0,0
30-34	5	19,5	9	35,3	5	19,5
35-39	13	48,3	12	44,6	13	48,5
40-44	26	108,3	30	121,0	23	89,5
45-49	39	176,5	31	155,6	27	118,9
50-54	34	171,7	35	172,4	43	206,7
55-59	25	148,8	27	153,4	39	212,0
60-64	28	194,4	26	178,1	33	221,5
65-69	21	160,3	27	206,1	21	157,9
70-74	26	234,2	29	256,6	17	147,8
75+	41	225,3	39	209,7	40	210,5
Unknown	4		1		0	

Table 24: Distribution of Female Breast Cancer Cases in Different Age Groups by District, 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	1	0	0	0	1
25-29	3	0	0	1	0	4
30-34	5	6	6	1	1	19
35-39	12	12	8	4	1	37
40-44	37	18	12	10	2	79
45-49	54	19	13	2	8	96
50-54	52	30	15	9	6	112
55-59	38	18	21	13	1	91
60-64	43	23	14	5	2	87
65-69	27	17	17	3	4	68
70-74	31	15	13	5	6	70
75+	59	24	25	7	2	117
Unknown	0	1	0	0	0	1
TOTAL	**361**	**184**	**144**	**60**	**33**	**782**

FIGURE 12: Age-adjusted Incidence Rates (World Standard Population), Female Breast Cancer, 1998-2000

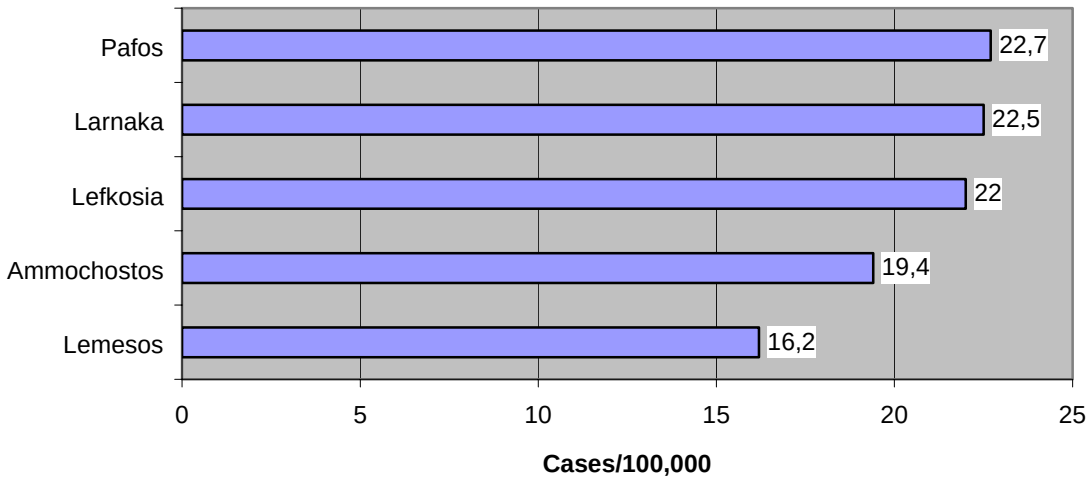


Table 24 shows the crude distribution of breast cancer cases, by district. Most of the cases have been observed in Lefkosia district followed by Lemesos, Larnaka and Pafos. After adjusted for age to the world standard population (figure 12) is found to be more common in Pafos, followed by Larnaka, Lefkosia, Ammochostos and Lemesos.

The most common morphological types of female breast cancer are the infiltrating duct carcinoma followed by the lobular and the tubular carcinoma. (Table 25)

Table 25: Cancer of Female Breast: Morphology of Tumors by Year of Diagnosis

Morphology	**ICD-0-2**	**1998**	**1999**	**2000**
INVASIVE CANCERS				
Neoplasm, malignant	8000	3(1,1%)	4(1,5%)	5(1,9%)
Carcinoma, NOS	8010	2(0,7%)	0(0,0%)	2(0,8%)
Carcinoma, undifferent., NOS	8020	0(0,0%)	0(0,0%)	1(0,4%)
Spindle cell carcinoma	8032	1(0,4%)	0(0,0%)	0(0,0%)
Papillary carcinoma	8050	0(0,0%)	0(0,0%)	3(1,1%)
Adenocarcinoma	8140	2(0,7%)	0(0,0%)	0(0,0%)
Scirrhous adenocarcinoma	8141	9(3,4%)	11(4,1%)	6(2,3%)
Cribriform carcinoma	8201	1(0,4%)	0(0,0%)	1(0,4%)
Tubular carcinoma	8211	2(0,7%)	2(0,7%)	10(3,8%)
Papillary adenocarcinoma	8260	1(0,4%)	0(0,0%)	0(0,0%)
Mucinous adenocarcinoma	8480	4(1,5%)	6(2,2%)	3(1,1%)
Infiltrating duct carcinoma	8500	211(79,6%)	217(81,0%)	197(75,5%)
Comedocarcinoma	8501	6(2,3%)	1(0,4%)	1(0,4%)
Intraductal papillary adenoca.	8503	1(0,4%)	0(0,0%)	0(0,0%)
Medullary carcinoma	8510	1(0,4%)	0(0,0%)	2(0,8%)
Lobular carcinoma	8520	11(4,1%)	23(8,6%)	15(5,7%)
Infiltrating ductular carcinoma	8521	0(0,0%)	2(0,7%)	3(1,1%)
Infiltrating duct & lobular ca.	8522	7(2,6%)	2(0,7%)	9(3,4%)
Inflammatory carcinoma	8530	1(0,4%)	0(0,0%)	0(0,0%)
Paget's Disease mammary	8540	0(0,0%)	0(0,0%)	1(0,4%)
Puget's disease & infiltr. duct ca.	8541	2(0,7%)	0(0,0%)	2(0,8%)
TOTAL INVASIVE CASES		**265(100%)**	**268(100%)**	**261(100%)**
IN SITU CANCERS	**ICD-0-2**	**1998**	**1999**	**2000**
Carcinoma in situ	8010	4(66,6%)	2(15,4%)	1(5,9%)
Papillary carcinoma in situ	8050	1(16,7%)	0(0,0%)	0(0,0%)
Adenocarcinoma in situ	8140	0(0,0%)	1(7,7%)	0(0,0%)
Intraductal ca. non infiltrating	8500	0(0,0%)	2(15,4%)	9(52,9%)
Comedocarcin. non infiltrating	8501	0(0,0%)	6(46,1%)	4(23,5%)
Non infiltrating Intraductal papillary adenocarcinoma	8503	0(0,0%)	0(0,0%)	2(11,8%)
Lobular carcinoma in situ	8520	1(16,7%)	2(15,4%)	0(0,0%)
Intraductal carcinoma and lobular carcinoma in situ	8522	0(0,0%)	0(0,0%)	1(5,9%)
TOTAL NON-INVASIVE CASES		**6(100%)**	**13(100%)**	**17(100%)**

It is interesting to note that most breast cancers are diagnosed when in situ and localised, while slightly over 10% are diagnosed with distant metastasis (table 26). It is expected that the introduction of the mammography screening programme and the broadening of public information/education programme will result in the diagnosis at an earlier stage in the future, when tumour size is small without regional metastasis.

Table 26: Cancer of Female Breast: Staging by Year of Diagnosis

Stage		**1998**	**1999**	**2000**
0	In situ	6	13	17
1	Localized only	153(56,7%)	136(48,4%)	139(50,0%)
2	Regional by direct extension only	2(0,7%)	18(6,4%)	10(3,6%)
3	Regional lymph nodes involved only	95(35,2%)	103(36,7%)	88(31,6%)
4	Regional by both direct extension & lymph nodes	1(0,4%)	2(0,7%)	11(4,0%)
5	Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7	Distant site(s)/node(s) involved	12(4,4%)	4(1,4%)	7(2,5%)
9	Unknown	2(0,7%)	5(1,8%)	6(2,2%)
	TOTAL INVASIVE	**265(100%)**	**268(100%)**	**261(100%)**

Cancer of the Prostate

- On average, 181 cancers of the prostate were registered per year.
- Almost half of cases were diagnosed over 75 years of age.
- 23% of male cancers.
- The first, most commonly diagnosed male cancer.

Prostate cancer was the first most commonly diagnosed cancer in males (excluding NMS). On average, there were 181 cases of prostate cancer registered each year representing 23% of all male cancers.

Table 27: Summary Statistics

YEAR INCIDENCE	1998	1999	2000
Incident Cases	147	155	243
Crude Rate (per 100,000)	43,7	45,7	70,8
WASR (per 100,000)	29,8	30,7	48,3
% of Male Cancers	19,9	20,0	28,2
% Microscopically Verified	91,8	97,4	95,9

Cumulative Risk 1998-2000 (0-74) (%) Male 1,41

WASR = Rates standardised for age to the world standard population.

Age Profile

Cancer of the prostate mainly occurred in older males, almost half of the cases diagnosed are over the age of 75 years (figure 13). Nearly 23% occurred in those over 80 years of age. The age specific incidence (tables 28) rates rose steadily after the age of 60 and peaked in the very old persons (80+).

FIGURE 13: Age Distribution of Prostate Cancer Cases, 1998-2000

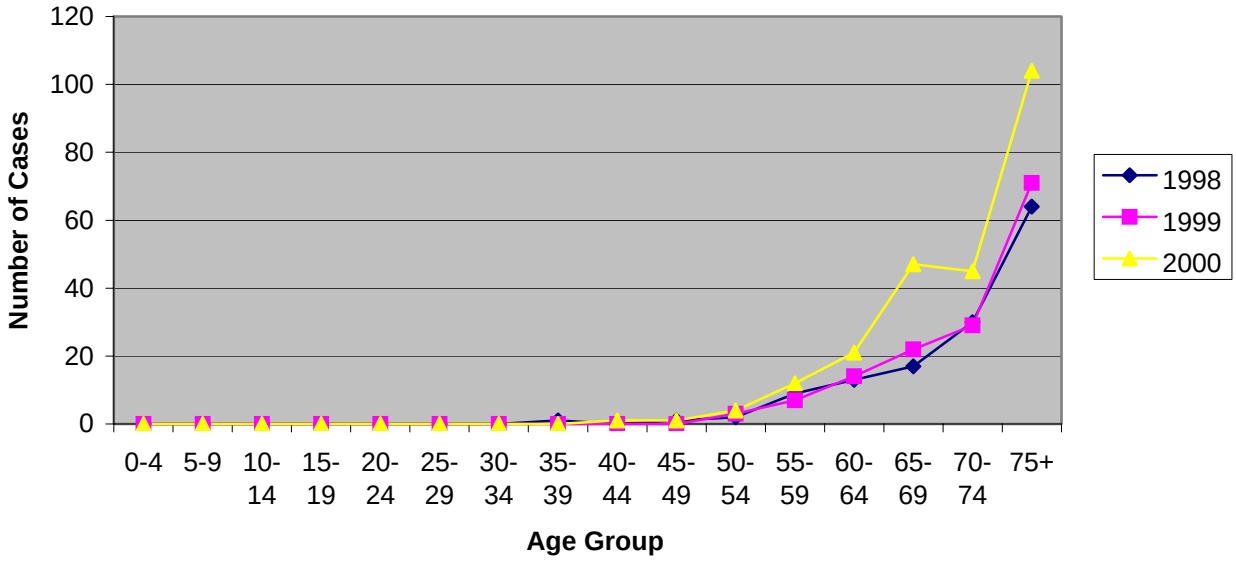


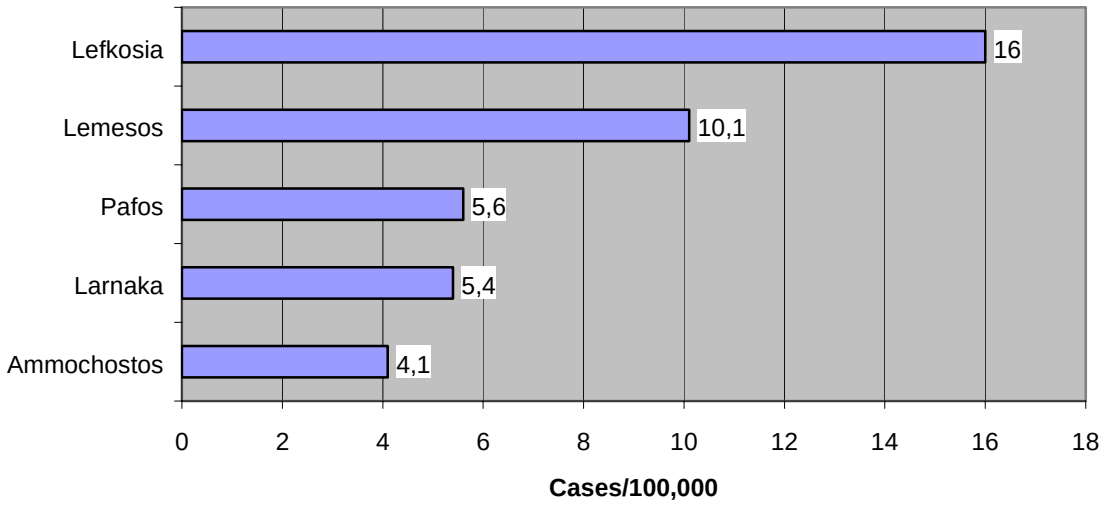
Table 28: Age Specific Incidence Rate per 100,000 populations (ASIR) of Prostate Cancer Cases 1998-2000

Age Group	1998		1999		2000	
	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	0	0,0
30-34	0	0,0	0	0,0	0	0,0
35-39	1	3,8	0	0,0	0	0,0
40-44	0	0,0	0	0,0	1	3,9
45-49	1	4,6	0	0,0	1	4,4
50-54	2	10,2	3	15,0	4	19,7
55-59	9	54,9	7	40,7	12	66,3
60-64	13	97,7	14	102,2	21	150,0
65-69	17	157,4	22	198,2	47	408,7
70-74	30	333,3	29	318,7	45	489,1
75+	64	463,8	71	503,5	104	732,4
Unknown	10		9		8	

Table 29: Prostate Cancer Cases by District, 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	1	0	1
40-44	1	0	0	0	0	1
45-49	1	1	0	0	0	2
50-54	3	5	0	0	0	8
55-59	18	6	1	1	0	26
60-64	27	13	3	1	0	44
65-69	43	17	10	5	1	76
70-74	55	28	6	4	3	96
75+	124	53	16	12	4	209
Unknown	4	1	0	1	0	6
TOTAL	**276**	**124**	**36**	**25**	**8**	**469**

FIGURE 14: Age-adjusted Incidence Rates (World Standard Population), Prostate Cancer, 1998-2000



Most of the prostate cancer cases are observed in Lefkosia district followed by Lemesos (table 29), even when adjusted by age to the World Standard Population (figure 14).

Morphology

Almost 94% of tumours were classified as adenocarcinoma with about 2,7% carcinomas not otherwise specified.

Microscopic Verification

In later years, over 95% of the prostate cancer cases were microscopically verified.

Over 81% of prostate cancer cases are diagnosed when localised. (Table 30)

Table 30: Cancer of Prostate: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	0	4
1 Localized only	124(84,3%)	125(80,7%)	193(79,4%)
2 Regional by direct extension only	1(0,7%)	11(7,1%)	12(4,9%)
3 Regional lymph nodes involved only	5(3,4%)	2(1,3%)	1(0,4%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	1(0,6%)	0(0,0%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	17(11,6%)	9(5,8%)	22(9,1%)
9 Unknown	0(0,0%)	7(4,5%)	15(6,2%)
TOTAL INVASIVE	**147(100%)**	**155(100%)**	**243(100%)**

Cancer of the Bronchus and Lung

- On average, 124 cancers of the bronchus and lung were registered per year.
- It was the 3nd most common cancer in males and the 9th in females.
- More common over the age of 50 years.

On average, during the 1998-2000 period, 124 bronchus and lung cancers were registered each year. Bronchus and lung cancer accounted for 12,7% of all cancers in males and 3% of all cancers in females. It was the 3nd most common cancer in males and the 9th most common cancer in females.

The number of cases and age-standardized rates has increased in both sexes. Subsequent years data will be necessary to determine if this is the future trend of lung cancer cases.

Table 31: Summary Statistics

YEAR	Males			Females		
INCIDENCE	1998	1999	2000	1998	1999	2000
Incident Cases	87	104	111	18	23	28
Crude Rate (per 100,000)	25,9	30,6	32,3	5,2	6,6	7,9
WASR (per 100,000)	20,0	23,8	24,9	3,7	5,0	5,5
% of All Cancers	11,8	13,4	12,9	2,3	3,1	3,6
%Microscopically Verified	89,7	87,5	87,4	83,3	91,3	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,99 Female 0,20

WASR= Rates standardized for age to the world standard population.

Age Profile

Before the age of 40 years, bronchus and lung cancer was very rare, while after the age of 40 years the rates rose steeply. Most of the cases (90%) were diagnosed after the age of 50 years. (Figure 15, table 32)

FIGURE 15: Age Distribution of Bronchus and Lung Cancer Cases 1998-2000

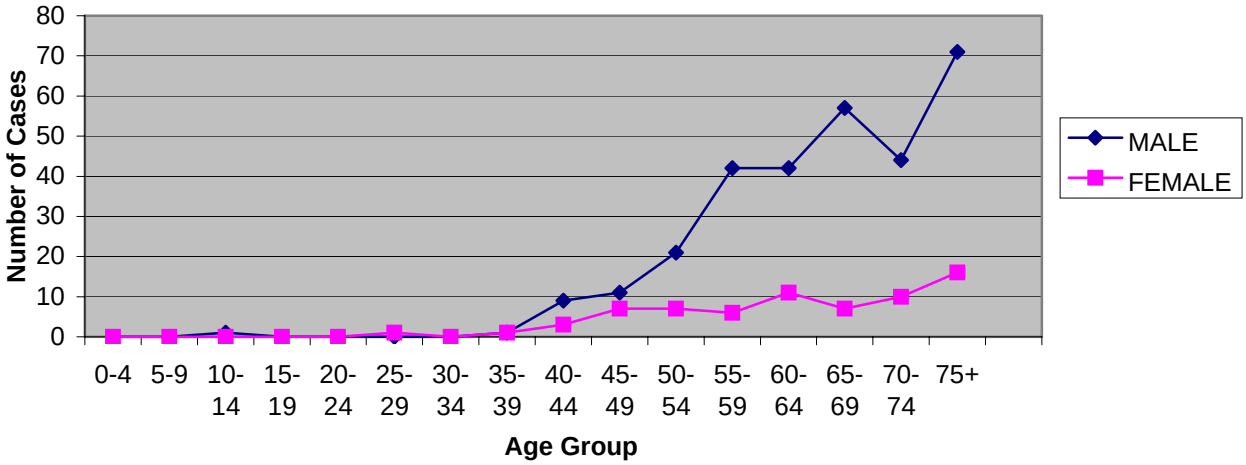


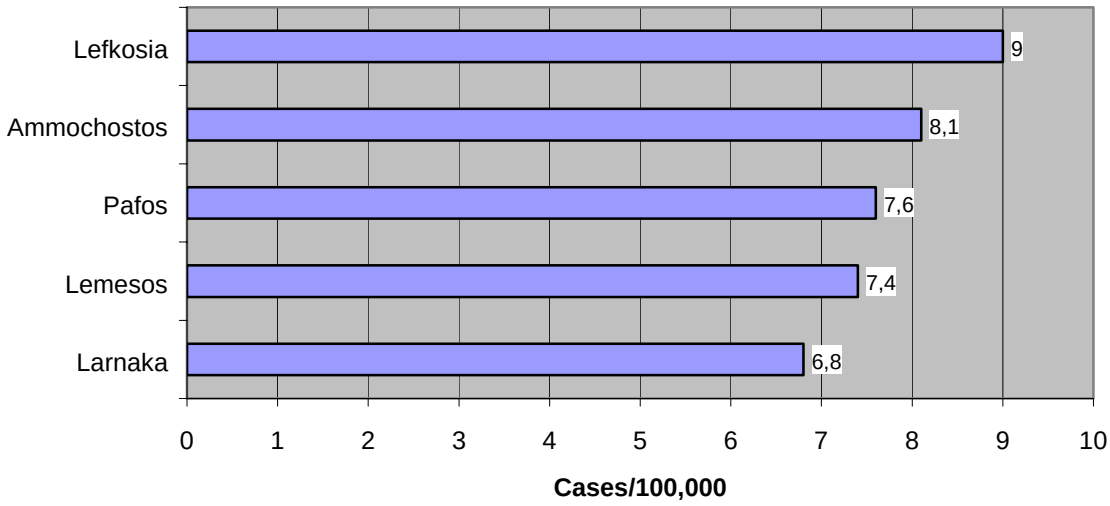
Table 32: Age Specific Incidence Rate of Bronchus and Lung Cancer per 100,000 population (ASIR) 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	3,5	0	0,0	1	1,8
15-19	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	3,9	1	2,1
30-34	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
35-39	0	0,0	1	3,7	1	1,9	0	0,0	0	0,0	0	0,0	1	3,9	0	0,0	1	1,9
40-44	4	16,5	0	0,0	4	8,3	4	16,0	2	8,1	6	12,0	1	3,9	1	3,9	2	3,9
45-49	1	4,6	2	9,1	3	6,8	7	31,7	2	8,9	9	20,2	3	13,3	3	13,2	6	13,3
50-54	6	30,8	1	5,1	7	17,8	6	30,0	2	9,9	8	19,9	9	44,2	4	19,2	13	31,6
55-59	5	30,5	1	6,0	6	18,1	15	87,3	3	17,1	18	51,7	22	121,5	2	10,8	24	65,8
60-64	13	97,8	3	20,8	16	57,8	16	116,9	6	41,1	22	77,7	13	92,9	2	13,4	15	51,9
65-69	19	175,9	3	22,9	22	96,1	16	144,2	1	7,6	17	70,2	22	190,9	3	22,5	25	100,8
70-74	12	133,4	2	18,0	14	69,7	16	175,9	3	26,5	19	93,1	16	173,9	5	43,4	21	101,4
75+	25	181,2	5	27,5	30	93,7	24	170,2	4	21,5	28	85,6	22	154,9	7	36,8	29	87,3
Unknown	2		0		2		0		0		0		1		0		1	

Table 33: Bronchus and Lung Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	1	0	0	0	0	1
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	1	0	0	0	1
40-44	7	1	1	0	0	9
45-49	6	4	0	0	0	10
50-54	8	9	1	2	1	21
55-59	14	12	7	4	5	42
60-64	21	10	5	5	1	42
65-69	24	14	12	4	2	56
70-74	18	14	4	5	2	43
75+	42	14	7	6	2	71
Unknown	0	0	1	0	0	1
TOTAL	**141**	**79**	**38**	**26**	**13**	**297**

FIGURE 16: Age-adjusted Incidence Rates (World Standard Population), Bronchus and Lung Cancer in Males, 1998-2000

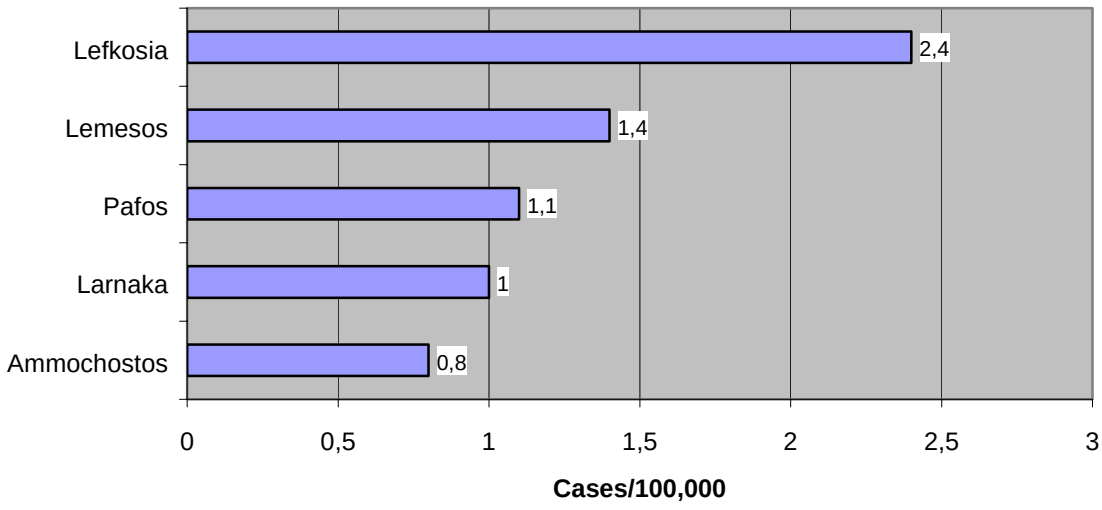


When adjusted by age, bronchus and lung cancer in males was more common in Lefkosia district, followed by Ammochostos, Pafos, Lemesos and Larnaka (figure 16), while in females was more common in Lefkosia followed by Lemesos, Pafos, Larnaka and Ammochostos (figure 17).

Table 34: Bronchus and Lung Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	1	0	0	0	0	1
30-34	0	0	0	0	0	0
35-39	1	0	0	0	0	1
40-44	0	2	1	0	0	3
45-49	3	2	2	0	0	7
50-54	5	1	1	0	0	7
55-59	4	2	0	0	0	6
60-64	7	3	0	1	0	11
65-69	5	2	0	0	0	7
70-74	5	3	1	0	1	10
75+	11	1	2	1	1	16
Unknown	0	0	0	0	0	0
TOTAL	**42**	**16**	**7**	**2**	**2**	**69**

FIGURE 17: Age-adjusted Incidence Rates (World Standard Population), Bronchus and Lung Cancer in Females, 1998-2000



Morphology

About 88,9% of the cases have a microscopic verification (88,1% males, 92,8% females). Of those, adenocarcinomas were the most commonly diagnosed accounting for 47,7% of male tumors and 79,7% of female cancers. Squamous cell carcinoma accounted for 24,8% of the male cancers and 15,5% of the female cancers. Small cell carcinoma accounted for 10,6% of the male cases and 1,4% of the female cases. (Table 35)

It is known that adenocarcinoma and squamous cell carcinoma are highly unusual in males. Further investigation is needed to identify the cause of this discrepancy in Cyprus.

Table 35: Morphologies of Cancer of the Bronchus and Lung in Cyprus 1998-2000

ICD-0-2		Male	Female
8000	Neoplasm, malignant	33(10,9 %)	3(4,4%)
8010	Carcinoma, NOS	11(3,6%)	0(0,0%)
8012	Large cell carcinoma	1(0,3%)	0(0,0%)
8020	Carcinoma, undifferentiated, NOS	4(1,3%)	0(0,0%)
8031	Giant cell carcinoma	2(0,7%)	0(0,0%)
8041	Small cell carcinoma	27(8,9%)	1(1,4%)
8042	Oat cell carcinoma	4(1,3%)	0(0,0%)
8043	Small cell carcinoma, fusiform cell	1(0,3%)	0(0,0%)
8070	Squamous cell carcinoma	73(24,2%)	10(14,5%)
8071	Squamous cell ca., keratinizing, NOS	2(0,7%)	0(0,0%)
8140	Adenocarcinoma, NOS	134(44,4%)	46(66,7%)
8240	Carcinoid tumor, NOS	3(1,0%)	1(1,4%)
8246	Neuroendocrine carcinoma	2(0,7%)	0(0,0%)
8250	Bronchiolo-alveolar adenocarcinoma	3(1,0%)	4(5,8%)
8251	Alveolar adenocarcinoma	2(0,7%)	3(4,4%)
8290	Oxypholic adenocarcinoma	0(0,0%)	1(1,4%)
TOTAL		**302(100%)**	**69(100%)**

Microscopic Verification

Microscopic verification has increased over the period 1998-2000. About 89% of cases have microscopic verification of cancer during that period.

Table 36: Cancer of Bronchus and Lung: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	0	0
1 Localized only	68(64,7%)	58(45,7%)	51(36,7%)
2 Regional by direct extension only	2(1,9%)	6(4,7%)	8(5,8%)
3 Regional lymph nodes involved only	15(14,3%)	14(11,0%)	6(4,3%)
4 Regional by both direct extension & lymph nodes	1(1,0%)	9(7,1%)	12(8,6%)
5 Regional not otherwise specified	0(0,0%)	3(2,4%)	0(0,0%)
7 Distant site(s)/node(s) involved	15(14,3%)	25(19,7%)	35(25,2%)
9 Unknown	4(3,8%)	12(9,4%)	27(19,4%)
TOTAL INVASIVE	**105(100%)**	**127(100%)**	**139(100%)**

Most of the bronchus and lung cancer are diagnosed when localized and/or at a distant site with nodes involved. (Table 36)

Cancer of the Bladder

- On average, 122 cases of cancer of the bladder were registered per year.
- 4 in 5 cases occur in males.
- Half of the cases were over 70 years of age.
- The second most common forms of cancer in males.

On average 122 cases of bladder cancer were registered in each study year. Over three quarters (84%) of the cases occurred in males. Bladder cancer was the second most commonly diagnosed cancer in males and accounted almost 13% of all male cancers and 2,6% of all female cancers.

Table 37: Summary Statistics

YEAR INCIDENCE	Males			Females		
	1998	1999	2000	1998	1999	2000
Incident Cases	103	98	105	27	20	12
Crude Rate (per 100,000)	30,6	28,9	30,6	7,8	5,7	3,4
WASR (per 100,000)	22,1	20,2	22,8	4,5	3,6	2,1
% of All Cancers	13,9	12,6	12,2	3,5	2,7	1,6
%Microscopically Verified	100,0	99,0	99,0	100,0	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,89 Female 0,14

WASR = Rates standardised for age to the world standard population.

Age Profile

This disease predominantly occurs in late adulthood – age specific rates in both sexes is continuously rise after about 70 years, peaking in the oldest age groups. (Figure 18, table 38)

FIGURE 18: Age Distribution of Bladder Cancer Cases, 1998-2000

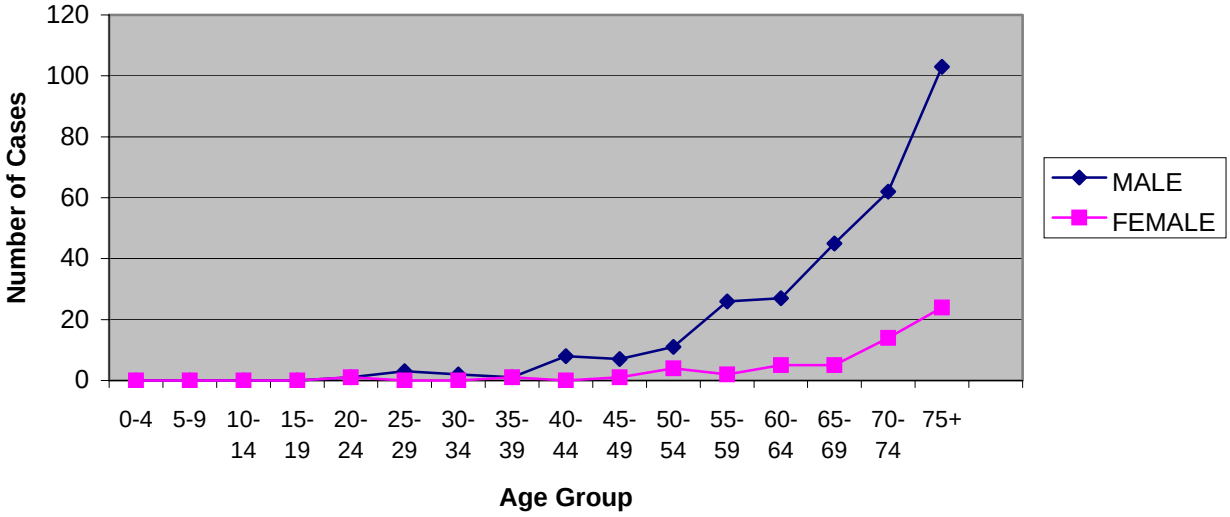


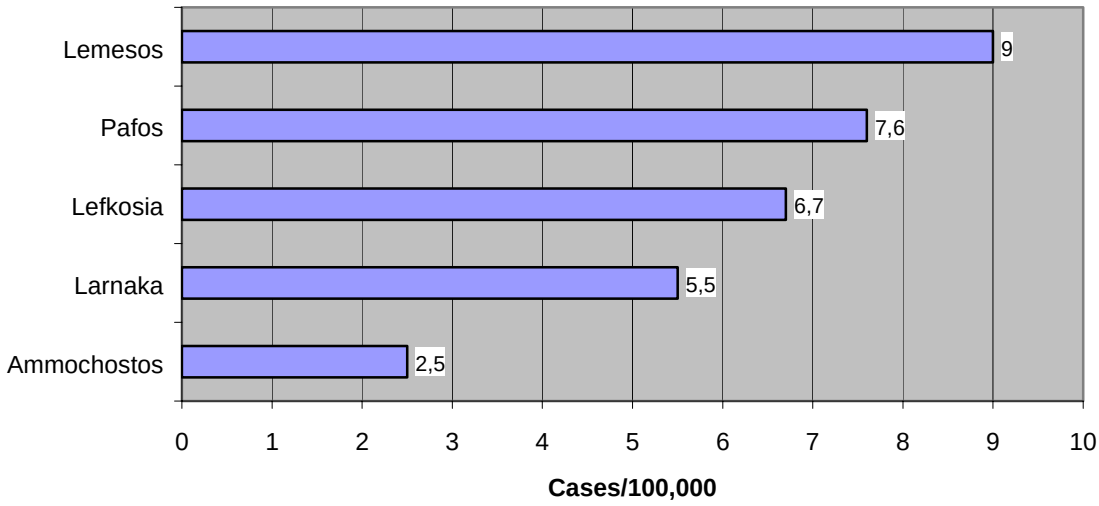
Table 38: Age Specific Incidence Rate per 100,000 population (ASIR) of Bladder Cancer Cases 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	3,9	1	3,7	2	3,8
25-29	1	4,4	0	0,0	1	2,1	1	4,4	0	0,0	1	2,1	1	4,4	0	0,0	1	2,1
30-34	0	0,0	0	0,0	0	0,0	1	4,2	0	0,0	1	2,0	1	4,2	0	0,0	1	2,0
35-39	1	3,8	1	3,7	2	3,8	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
40-44	2	8,3	0	0,0	2	4,1	4	16,0	0	0,0	4	8,0	2	7,8	0	0,0	2	3,9
45-49	3	13,8	0	0,0	3	6,8	0	0,0	1	4,4	1	2,2	4	17,8	0	0,0	4	8,8
50-54	3	15,4	1	5,1	4	10,2	6	30,0	3	14,8	9	22,3	2	9,8	0	0,0	2	4,9
55-59	8	48,8	1	6,0	9	27,1	8	46,5	0	0,0	8	23,0	10	55,1	1	5,4	11	30,1
60-64	8	60,2	3	20,8	11	39,7	4	29,2	2	13,7	6	21,2	15	106,9	0	0,0	15	51,9
65-69	15	139,0	2	15,3	17	71,1	15	135,2	1	7,6	16	66,1	15	130,4	2	15,0	17	68,5
70-74	20	222,4	4	36,0	24	119,4	17	186,9	6	53,1	23	112,7	25	271,2	4	34,8	29	140,1
75+	37	268,1	13	71,4	50	156,2	37	262,4	7	37,7	44	134,6	29	204,2	4	21,1	33	99,4
Unknown	5		3		8		5		0		5		0		0		0	

Table 39: Bladder Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	1	0	0	0	0	1
25-29	1	2	0	0	0	3
30-34	2	0	0	0	0	2
35-39	0	0	0	0	0	0
40-44	3	3	0	1	0	7
45-49	4	2	0	1	0	7
50-54	4	3	1	1	1	10
55-59	4	12	6	3	1	26
60-64	13	7	5	2	0	27
65-69	17	15	2	6	0	40
70-74	24	23	9	4	0	60
75+	35	38	12	10	3	98
Unknown	0	2	0	1	0	3
TOTAL	**108**	**107**	**35**	**29**	**5**	**284**

FIGURE 19: Age-adjusted Incidence Rates (World Standard Population), Bladder Cancer in Males, 1998-2000

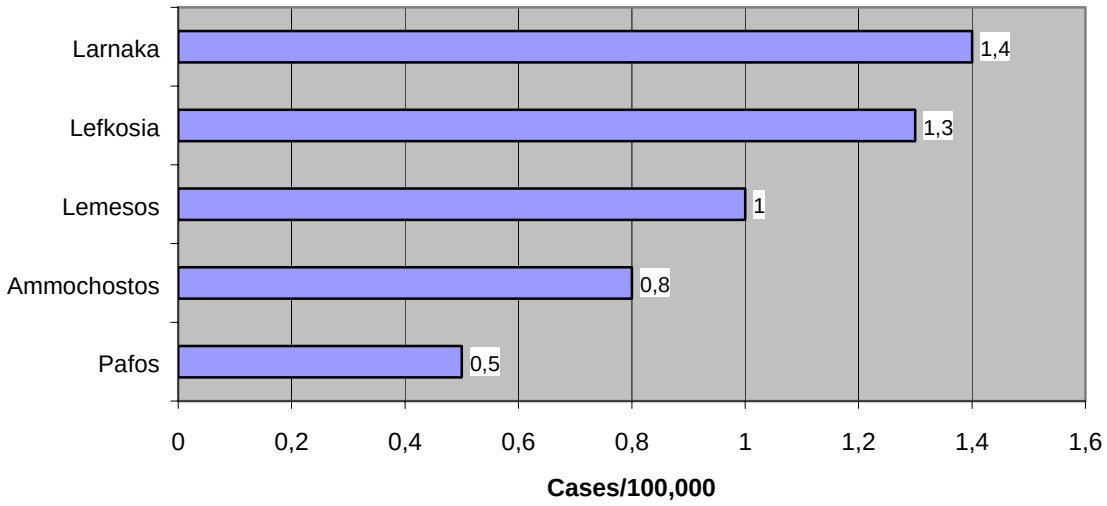


When adjusted by age, bladder cancer in males was more common in Lemesos district, followed by Pafos, Lefkosia, Larnaka and Ammochostos (figure 19), while in females was more common in Larnaka followed by Lefkosia, Lemesos, Ammochostos and Pafos (figure 20).

Table 40: Bladder Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	1	0	0	1
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	0	0	0	0	1
40-44	0	0	0	0	0	0
45-49	1	0	0	0	0	1
50-54	4	0	0	0	0	4
55-59	0	2	0	0	0	2
60-64	2	1	2	0	0	5
65-69	2	1	1	1	0	5
70-74	6	2	3	1	1	13
75+	9	9	3	0	1	22
Unknown	0	1	0	0	0	1
TOTAL	**25**	**16**	**10**	**2**	**2**	**55**

FIGURE 20: Age-adjusted Incidence Rates (World Standard Population), Bladder Cancer in Females, 1998-2000



Microscopic Verification

The numbers of microscopically verified bladder cancer cases were 99% for both sexes.

Morphology

The most commonly presented morphological types of bladder cancer are the papillary transitional cell carcinoma (49,9%) and the transitional cell carcinoma (46,0%) in both sexes. (Table 41)

Table 41: Cancer of the Bladder, Morphology by Year of Diagnosis

Morphology Description	ICD-0-2 Code			
MALES INVASIVE CANCERS		**1998**	**1999**	**2000**
Carcinoma, NOS	8010	0(0,0%)	1(1,0%)	0(0,0%)
Papillary carcinoma	8050	3(2,9%)	0(0,0%)	2(1,9%)
Squamous cell carcinoma	8070	1(1,0%)	0(0,0%)	0(0,0%)
Transitional cell carcinoma	8120	47(45,6%)	41(41,9%)	54(51,4%)
Papillary Transitional cell carcinoma	8130	50(48,5%)	54(55,1%)	47(44,8%)
Adenocarcinoma	8140	1(1,0%)	1(1,0%)	2(1,9%)
Carcinosarcoma	8980	1(1,0%)	1(1,0%)	0(0,0%)
TOTAL INVASIVE CANCERS		**103(100%)**	**98(100%)**	**105(100%)**
FEMALES INVASIVE CANCERS		**1998**	**1999**	**2000**
Papillary carcinoma	8050	1(3,7%)	0(0,0%)	0(0,0%)
Transitional cell carcinoma	8120	12(44,4%)	11(55,0%)	3(25,0%)
Papillary Transitional cell carcinoma	8130	13(48,2%)	9(45,0%)	9(75,0%)
Adenocarcinoma	8140	1(3,7%)	0(0,0%)	0(0,0%)
TOTAL INVASIVE CANCERS		**27(100%)**	**20(100%)**	**12(100%)**

On average 90% of the in situ carcinoma of bladder cancers are localized. (Table 42)

Table 42: Cancer of the Bladder: Staging by Year of Diagnosis

	MALES	1998	1999	2000
0	In situ	2	1	0
1	Localized only	95(92,2%)	73(74,5%)	92(87,6%)
2	Regional by direct extension only	1(1,0%)	21(21,4%)	10(9,5%)
3	Regional lymph nodes involved only	4(3,9%)	1(1,0%)	0(0,0%)
4	Regional by both direct ext. & lymph nodes	0(0,0%)	1(1,0%)	1(1,0%)
5	Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7	Distant site(s)/node(s) involved	2(1,9%)	0(0,0%)	1(1,0%)
9	Unknown	1(1,0%)	2(2,1%)	1(1,0%)
	TOTAL INVASIVE	**103(100%)**	**98(100%)**	**105(100%)**
	FEMALES	**1998**	**1999**	**2000**
0	In Situ	0	0	0
1	Localized only	25(92,6%)	12(60,0%)	10(83,4%)
2	Regional by direct extension only	1(3,7%)	6(30,0%)	1(8,3%)
3	Regional lymph nodes involved only	1(3,7%)	0(0,0%)	0(0,0%)
4	Regional by both direct ext. & lymph nodes	0(0,0%)	0(0,0%)	0(0,0%)
5	Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7	Distant site(s)/node(s) involved	0(0,0%)	1(5,0%)	0(0,0%)
9	Unknown	0(0,0%)	1(5,0%)	1(8,3%)
	TOTAL INVASIVE	**27(100%)**	**20(100%)**	**12(100%)**

Grade

The grade of the tumor is a specific measurement made by the pathologist. The higher the grade of the tumor, the more abnormal it looks from the tissue it arises from. Tumors of a higher grade tend to behave more aggressively than those of a lower grade. Most of the cases found are well and moderately differentiated cancers. (Table 43)

Table 43: Cancer of the Bladder: Grade of Tumor by Year 1998-2000

	Grade	1998	1999	2000
1	Well differentiated	49(37,7%)	44(37,3%)	32(27,4%)
2	Moderately differentiated	53(40,8%)	45(38,1%)	44(37,6%)
3	Poorly differentiated	26(20,0%)	27(23,0%)	35(29,9%)
4	Undifferentiated	0(0,0%)	1(0,8%)	0(0,0%)
9	Unknown	2(1,5%)	1(0,8%)	6(5,1%)
TOTAL		**130(100%)**	**118(100%)**	**117(100%)**

Cancer of the Colon

- On average, 121 cancer cases of colon were registered per year.
- Slightly more cases in females (51,9%)
- 8% of all cancers diagnosed.
- Half of the cases were over age 70 years in both sexes.

On average, 121 colon cancers were registered each year, with slightly more cases diagnosed in females than males. Colon cancer was the second most common form of cancer diagnosed in females and the fourth in males and it amounted for about 8% of all cancers diagnosed.

Table 44: Summary Statistics

YEAR INCIDENCE	MALES			FEMALES		
	1998	1999	2000	1998	1999	2000
Incident Cases	58	59	58	58	58	73
Crude Rate (per 100,000)	17,3	17,4	16,9	16,7	16,5	20,5
WASR (per 100,000)	12,7	13,0	12,3	11,7	11,2	12,7
% of All Cancers	7,8	7,6	6,7	7,5	7,7	9,6
% Microscopically Verified	100,0	100,0	100,0	91,4	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,54 Female 0,46

WASR = Rates standardised for age to the world standard population

Age Profile

Colon cancer in both sexes was more commonly occurred after the age of 50 years (figure 21, table 45) with most cases observed in 70 and 80 years old persons.

FIGURE 21: Age Distribution of Colon Cancer Cases 1998-2000

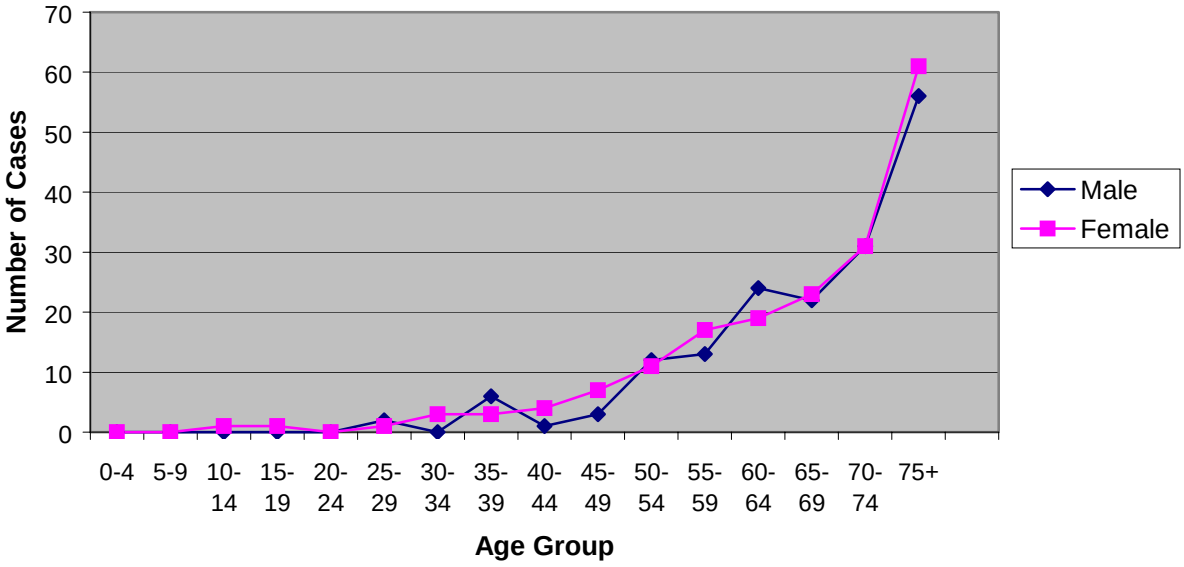


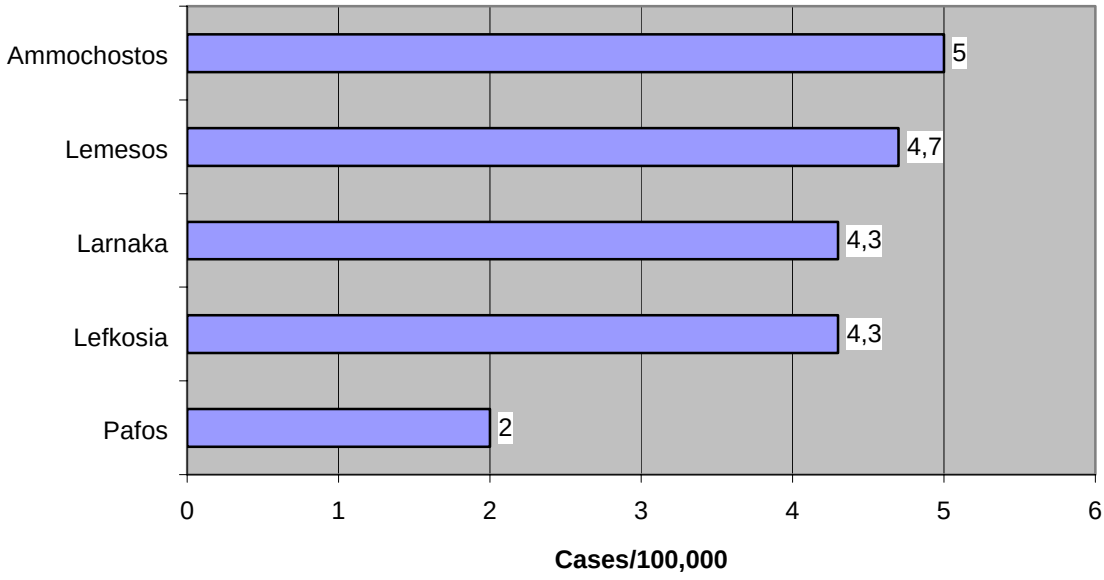
Table 45: Age Specific Incidence Rate per 100,000 population (ASIR) of Colon Cancer Cases 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	1	3,7	1	1,8	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0	0	0,0	1	3,6	1	1,8	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	0	0,0	1	4,4	0	0,0	1	2,1	1	4,4	1	3,9	2	4,2
30-34	0	0,0	1	3,9	1	2,0	0	0,0	2	7,8	2	4,0	0	0,0	0	0,0	0	0,0
35-39	2	7,6	1	3,7	3	5,6	2	7,7	0	0,0	2	3,8	2	7,7	2	7,4	4	7,6
40-44	1	4,1	2	8,3	3	6,2	0	0,0	2	8,1	2	4,0	0	0,0	0	0,0	0	0,0
45-49	3	13,8	2	9,1	5	11,4	0	0,0	4	17,8	4	9,0	0	0,0	1	4,4	1	2,2
50-54	1	5,1	2	10,1	3	7,6	6	30,0	5	24,6	11	27,3	5	24,6	4	19,2	9	21,9
55-59	5	30,5	9	53,6	14	42,2	3	17,5	2	11,4	5	14,4	5	27,6	6	32,5	11	30,1
60-64	8	60,2	8	55,6	16	57,8	8	58,4	4	27,4	12	42,4	8	57,0	7	46,9	15	51,9
65-69	4	37,1	8	61,1	12	50,2	9	81,1	7	53,5	16	66,1	9	78,1	8	60,0	17	68,5
70-74	13	144,5	5	45,1	18	89,6	12	132,0	12	106,3	24	117,6	6	65,1	14	121,5	20	96,6
75+	18	130,5	16	88,0	34	106,2	18	127,7	17	91,5	35	107,0	20	140,6	28	147,1	48	144,6
Unknown	3		4		7		0		1		1		2		2		4	

Table 46: Colon Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	1	1	0	0	0	2
30-34	0	0	0	0	0	0
35-39	1	0	5	0	0	6
40-44	0	0	1	0	0	1
45-49	1	1	0	1	0	3
50-54	4	2	4	0	1	11
55-59	7	3	2	0	1	13
60-64	14	6	2	1	1	24
65-69	8	10	0	1	3	22
70-74	9	13	7	2	0	31
75+	23	18	7	3	2	53
Unknown	1	0	0	0	0	1
TOTAL	**69**	**54**	**28**	**8**	**8**	**167**

FIGURE 22: Age-adjusted Incidence Rates (World Standard Population), Colon Cancer in Males, 1998-2000

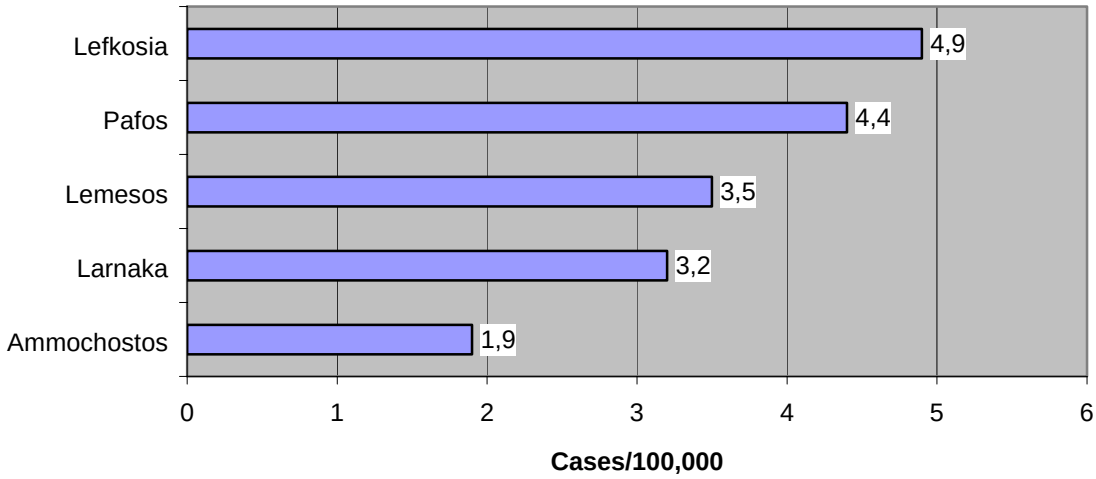


After adjusted by age colon cancer in males is more common in Ammochostos followed by Lemesos, Larnaka, Lefkosia and Pafos (figure 22) while in females is more common in Lefkosia followed by Pafos, Lemesos, Larnaka and Ammochostos (figure 23).

Table 47: Colon Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	1	0	0	0	1
15-19	1	0	0	0	0	1
20-24	0	0	0	0	0	0
25-29	1	0	0	0	0	1
30-34	2	0	1	0	0	3
35-39	2	1	0	0	0	3
40-44	1	3	0	0	0	4
45-49	3	2	1	1	0	7
50-54	8	1	1	1	0	11
55-59	5	4	5	2	0	16
60-64	8	7	2	0	2	19
65-69	10	5	3	3	0	21
70-74	20	6	1	2	1	30
75+	33	15	8	2	0	58
Unknown	1	0	1	1	0	3
TOTAL	**95**	**45**	**23**	**12**	**3**	**178**

FIGURE 23: Age-adjusted Incidence Rates (World Standard Population), Colon Cancer in Females, 1998-2000



Morphology and Site

Microscopic verification was available for 100% of tumours diagnosed in males and 97,4% of tumours diagnosed in females. The majority of tumours (92%) were classified as adenocarcinomas. A total of 23% of all colon cancers were right-sided tumours (caecum, appendix, ascending colon and hepatic flexure) whereas 37% were left-sided tumours, (splenic flexure, descending colon and sigmoid colon). These proportions should be interpreted cautiously as a large number (33%) of colon cancer had no proper assignment of site within the colon.

Microscopic Verification

The proportion of microscopically verified cases was high, at about 98%.

Table 48: Cancer of Colon: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	2	0	0
1 Localized only	22(19,0%)	20(17,1%)	15(11,5%)
2 Regional by direct extension only	41(35,3%)	43(36,8%)	63(48,1%)
3 Regional lymph nodes involved only	0(0,0%)	2(1,7%)	2(1,5%)
4 Regional by both direct extension & lymph nodes	28(24,1%)	33(28,2%)	32(24,4)
5 Regional not otherwise specified	0(0,0%)	2(1,7%)	0(0,0%)
7 Distant site(s)/node(s) involved	21(18,1%)	13(11,1%)	17(13,0%)
9 Unknown	4(3,5%)	4(3,4%)	2(1,5%)
TOTAL INVASIVE	**116(100%)**	**117(100%)**	**131(100%)**

About half of the cases have been diagnosed at stage 2 (regional by direct extension). (Table 48)

Non-Hodgkin's Lymphoma

- On average, 75 non-Hodgkin's lymphoma cases were registered per year.
- More common in males than in females.
- Half of the cases were over 60 years of age in males and 65 years of age in females.

On average 75 non-Hodgkin's lymphoma cases were registered in each year. Non- Hodgkin's lymphoma accounted for over 5,5% of all cancers in males and 4,2% in females.

Table 49: Summary Statistics

YEAR INCIDENCE	Males			Females		
	1998	1999	2000	1998	1999	2000
Incident Cases	46	45	40	30	36	29
Crude Rate (per 100,000)	13,7	13,3	11,6	8,7	10,3	8,2
WASR (per 100,000)	11,6	10,6	8,9	6,3	7,3	5,7
% of All Cancers	6,2	5,8	4,7	3,9	4,8	3,8
% Microscopically Verified	97,8	100,0	100,0	100,0	97,2	96,6

Cumulative Risk 1998-2000 (0-74) (%) Male 0,41 Female 0,26

WASR = Rates standardized for age to the world standard population.

Age Profile

The median age at diagnosis was younger in males 60 years of age than in females 65 years of age. (Table 50, figure 24)

FIGURE 24: Age Distribution of Non-Hogdkin´s Lymphoma Cases, 1998-2000

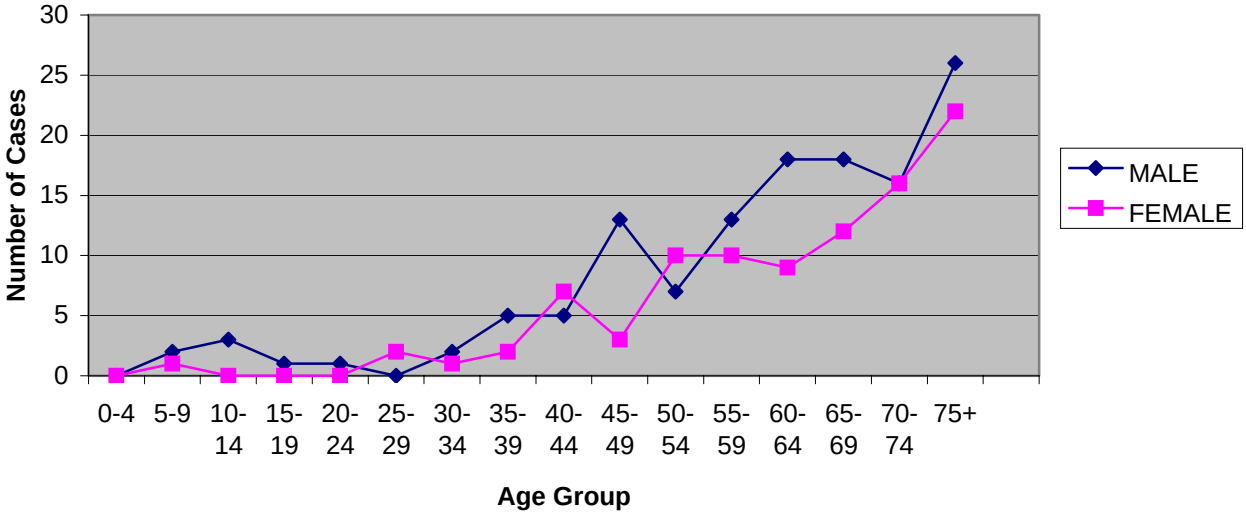


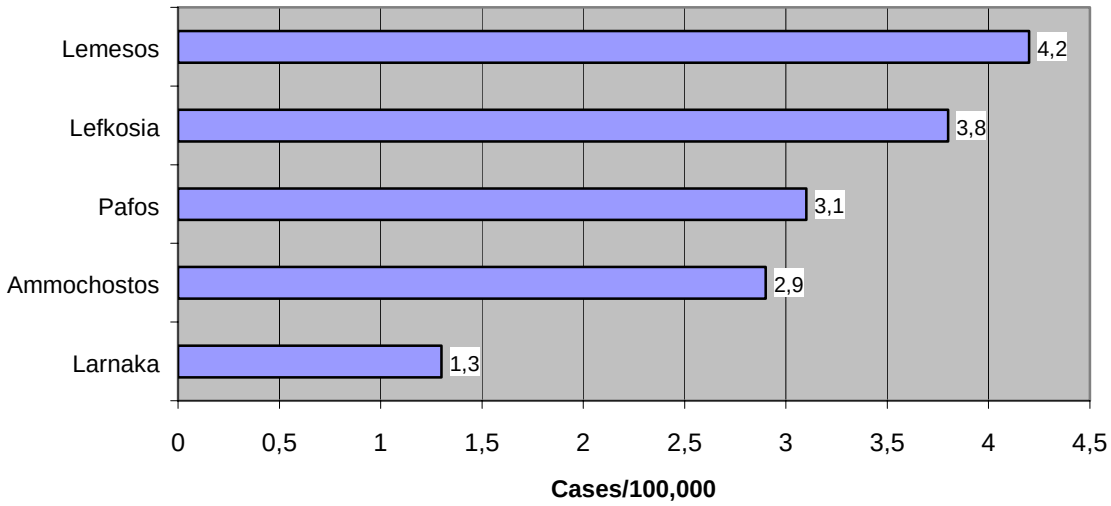
Table 50: Age Specific Incidence Rate per 100,000 population (ASIR) of Non-Hodgkin's Lymphoma Cases 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	1	3,5	0	0,0	1	1,8	0	0,0	1	3,7	1	1,8	1	3,6	0	0,0	1	1,8
10-14	1	3,5	0	0,0	1	1,8	2	7,0	0	0,0	2	3,6	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	3,4	0	0,0	1	1,7
20-24	1	4,2	0	0,0	1	2,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	0	0,0	1	4,0	1	2,1	0	0,0	1	4,0	1	2,1	0	0,0	0	0,0	0	0,0
30-34	2	8,2	0	0,0	2	4,0	0	0,0	1	3,9	1	2,0	0	0,0	0	0,0	0	0,0
35-39	2	7,6	0	0,0	2	3,7	2	7,7	1	3,7	3	5,7	1	3,9	1	3,7	2	3,8
40-44	1	4,1	3	12,5	4	8,3	2	8,0	1	4,0	3	6,0	2	7,8	3	11,6	5	9,7
45-49	6	27,7	0	0,0	6	13,7	5	22,6	2	8,9	7	15,7	2	8,9	1	4,4	3	6,6
50-54	2	10,3	4	20,2	6	15,3	3	15,0	3	14,8	6	14,9	2	9,8	3	14,4	5	12,2
55-59	4	24,4	4	23,8	8	24,1	3	17,5	4	22,7	7	20,1	6	33,1	1	5,4	7	19,2
60-64	5	37,6	2	13,9	7	25,3	7	51,1	3	20,6	10	35,3	6	42,9	4	26,8	10	34,6
65-69	9	83,4	4	30,6	13	54,4	6	54,1	3	22,9	9	37,0	3	26,0	5	37,5	8	32,2
70-74	6	66,7	6	54,1	12	59,7	5	55,0	6	53,1	11	53,6	5	54,2	4	34,7	9	43,5
75+	6	43,5	6	33,0	12	37,5	10	71,0	9	48,4	19	58,1	10	70,3	7	36,8	17	51,2
Unknown	0		0		0		0		1		2		1		0		1	

Table 51: Non-Hodgkin's Lymphoma Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	1	3	0	0	1	5
15-19	1	0	0	0	0	1
20-24	1	0	0	0	0	1
25-29	0	0	0	0	0	0
30-34	0	2	0	0	0	2
35-39	0	4	0	1	0	5
40-44	2	1	1	1	0	5
45-49	6	6	0	0	0	12
50-54	4	1	0	1	0	6
55-59	6	4	2	1	0	13
60-64	9	4	2	1	2	18
65-69	10	4	0	2	1	17
70-74	6	6	0	2	0	14
75+	10	10	3	2	0	25
Unknown	0	1	0	0	0	1
TOTAL	**56**	**46**	**8**	**11**	**4**	**125**

FIGURE 25: Age-adjusted Incidence Rates (World Standard Population), Non-Hodgkin´s Lymphoma in Males, 1998-2000



When adjusted by age, non-Hodgkin's lymphoma in males was more common in Lemesos district, followed by Lefkosia, Pafos, Ammochostos and Larnaka (figure 25), while in females was more common in Pafos followed by Larnaka, Ammochostos, Lemesos and Lefkosia (figure 26).

Table 52: Non-Hodgkin's Lymphoma Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	1	0	0	0	0	1
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	1	0	1
30-34	0	0	1	0	0	1
35-39	1	0	1	0	0	2
40-44	0	3	1	1	1	6
45-49	2	1	0	0	0	3
50-54	3	3	3	0	1	10
55-59	2	2	1	3	1	9
60-64	1	3	4	1	0	9
65-69	4	5	1	0	0	10
70-74	3	3	4	5	1	16
75+	14	2	2	1	0	19
Unknown	0	0	0	0	0	0
TOTAL	**31**	**22**	**18**	**12**	**4**	**87**

FIGURE 26: Age-adjusted Incidence Rates (World Standard Population), Non-Hodgkin´s Lymphoma in Females, 1998-2000

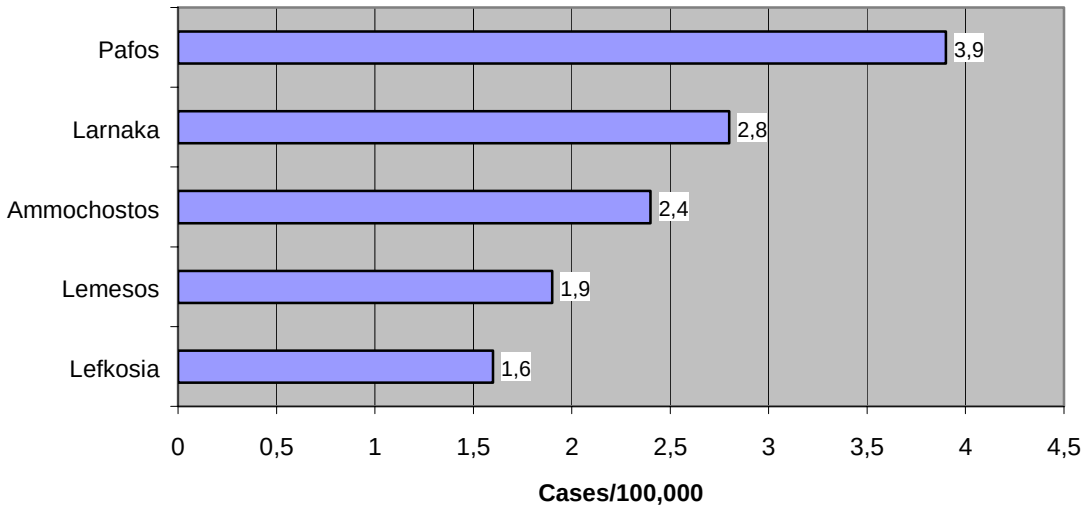


Table 53: Non-Hodgkin's Lymphoma
Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	0	0
1 Localized only	14(18,4%)	20(24,7%)	15(21,7%)
2 Regional by direct extension only	1(1,3%)	5(6,2%)	1(1,5%)
3 Regional lymph nodes involved only	4(5,3%)	4(4,9%)	1(1,5%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	1(1,2%)	2(2,9%)
5 Regional not otherwise specified	0(0,0%)	3(3,7%)	6(8,7%)
7 Distant site(s)/node(s) involved	56(73,7%)	43(53,1%)	39(56,5%)
9 Unknown	1(1,3%)	5(6,2%)	5(7,2%)
TOTAL INVASIVE	**76(100%)**	**81(100%)**	**69(100%)**

Table 54: Morphologies of Non-Hodgkin's Lymphoma
In Cyprus 1998-2000

ICD-0-2		Male	Female
9590	Malignant Lymphoma, NOS	25(19,0%)	23(24,2%)
9591	Malignant Lymphoma, Non-Hodgkin's, NOS	40(30,5%)	24(25,3%)
9670	Malignant Lymphoma, Small Lymphocytic, NOS	22(16,8%)	20(21,1%)
9671	Malignant Lymphoma, Lymphoplasmacytic	1(0,8%)	3(3,2%)
9673	Malignant Lymphoma, Lymphocytic, Intermediate Differentiation, Diffuse	8(6,1%)	1(1,0%)
9675	Malignant Lymphoma, mixed small and Large Cell, Diffuse	1(0,8%)	5(5,3%)
9680	Malignant Lymphoma, Large Cell, Diffuse, NOS	16(12,2%)	12(12,6%)
9684	Malignant Lymphoma, Immunoblastic, NOS	2(1,5%)	2(2,1%)
9687	Burkitt´s Lymphoma	0(0,0%)	1(1,0%)
9690	Malignant Lymphoma, Follicular, NOS	3(2,3%)	3(3,2%)
9691	Malignant Lymphoma, mixed Small Cleaved and Large Cell, Follicular	1(0,8%)	0(0,0%)
9695	Malignant Lymphoma, Small Cleaved Cell, Follicular	1(0,8%)	0(0,0%)
9698	Malignant Lymphoma, Large Cell, Follicular, NOS	6(4,5%)	0(0,0%)
9700	Mycosis Fungoides	2(1,5%)	1(1,0%)
9702	Peripheral T-cell Lymphoma, NOS	1(0,8%)	0(0,0%)
9709	Cutaneous Lymphoma	1(0,8%)	0(0,0%)
9713	Angiocentric T-cell Lymphoma	1(0,8%)	0(0,0%)
	TOTAL	**131(100,0%)**	**95(100,0%)**

The most common form observed in both sexes is the non-Hodgkin's lymphoma, which is mostly diagnosed in advanced stage (distant site with involved lymph nodes. (Tables 53, 54)

Cancer of the Rectum

- On average, 58 cancers of the rectum were registered per year.
- More common in males than females.
- Half of the cases were over 70 years in males and 65 years of age in female.
- 4% of male and 3,4% of female cancers.

On average, 58 rectal cancers were registered each year. More cases were registered in males than in females. Rectal cancer accounted for over 4% of the male cancers and about 3.4% of the female cancers. Rectal cancer was the 7th most commonly diagnosed form of cancer in males and the 8th in females.

Table 55: Summary Statistics

YEAR	Males			Females		
INCIDENCE	**1998**	**1999**	**2000**	**1998**	**1999**	**2000**
Incident Cases	25	32	38	19	25	34
Crude Rate (per 100,000)	7,4	9,4	11,1	5,5	7,1	9,6
WASR (per 100,000)	5,1	7,1	7,8	3,7	5,3	6,0
% of All Cancers	3,4	4,1	4,4	2,5	3,4	4,5
% Microscopically Verified	100,0	100,0	100,0	94,7	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,29 Female 0,19

WASR = Rates standardized for age to the world standard population.

Age Profile

Cancer of the rectum was diagnosed in females at a younger age than in males. (Table 56, figure 27)

FIGURE 27: Age Distribution of Rectum Cancer Cases, 1998-2000

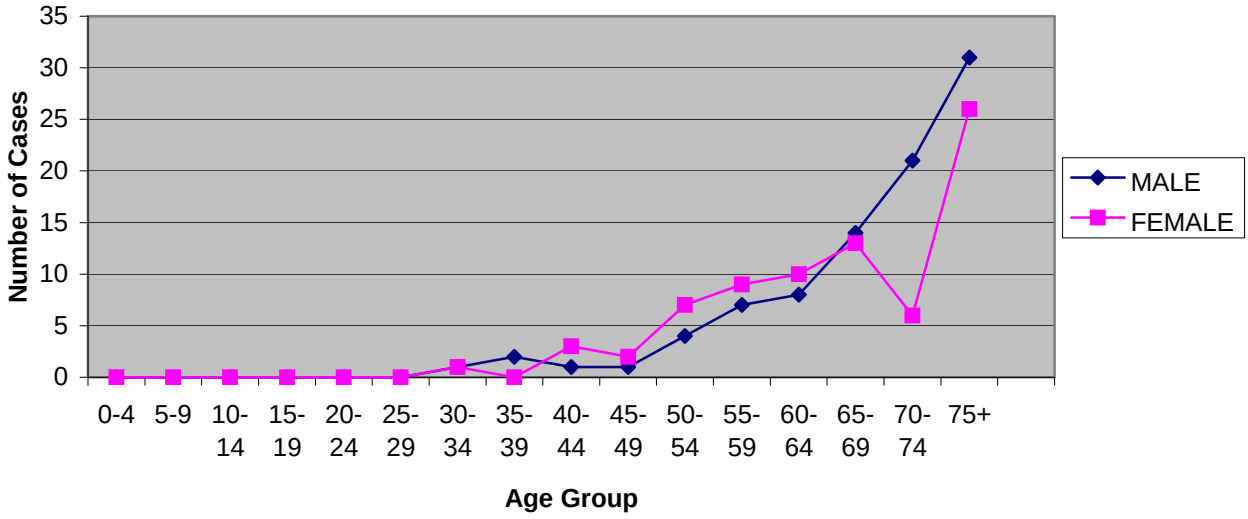


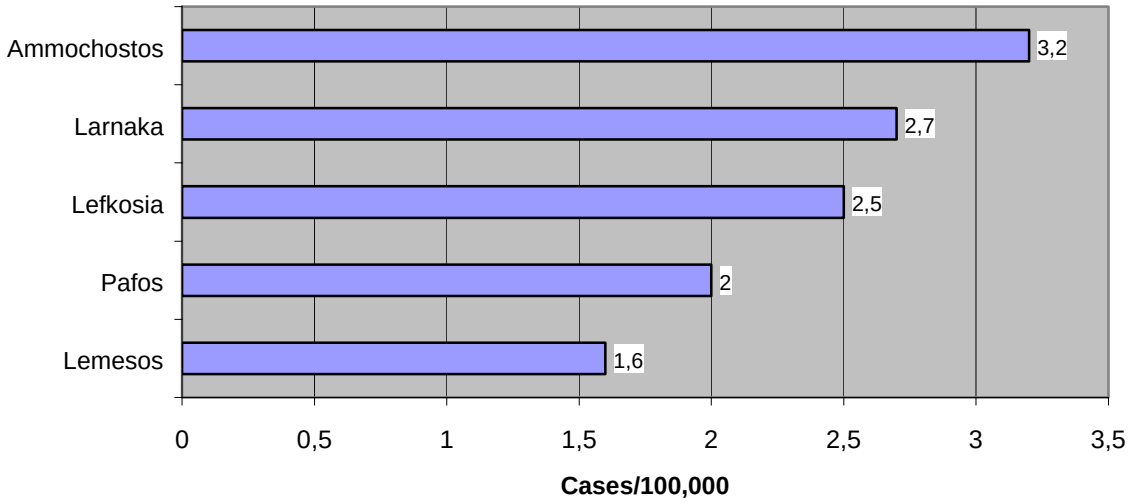
Table 56: Age Specific Incidence Rate per 100,000 population (ASIR) of Rectum Cancer Cases 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
30-34	0	0,0	0	0,0	0	0,0	1	4,2	0	0,0	1	2,0	0	0,0	1	3,9	1	2,0
35-39	0	0,0	0	0,0	0	0,0	1	3,8	0	0,0	1	1,9	1	3,9	0	0,0	1	1,9
40-44	0	0,0	0	0,0	0	0,0	0	0,0	2	8,1	2	4,0	1	3,9	1	3,9	2	3,9
45-49	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	4,4	2	8,8	3	6,6
50-54	0	0,0	2	10,1	2	5,1	2	10,0	3	14,8	5	12,4	2	9,8	2	9,6	4	9,7
55-59	1	6,1	4	23,8	5	15,1	4	23,3	2	11,4	6	17,2	2	11,0	3	16,3	5	13,7
60-64	1	7,5	1	6,9	2	7,2	4	29,2	5	34,3	9	31,8	3	21,4	4	26,8	7	24,2
65-69	4	37,0	4	30,6	8	33,5	6	54,1	5	38,2	11	45,5	4	34,8	4	30,1	8	32,3
70-74	7	77,8	1	9,0	8	39,8	4	44,0	3	26,6	7	34,3	10	108,5	2	17,4	12	58,0
75+	9	65,2	6	33,0	15	46,9	9	63,9	5	26,9	14	42,8	13	91,4	15	78,8	28	84,3
Unknown	3		1		4		1		0		1		2		0			

Table 57: Rectum Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	0	0	0	1
35-39	2	0	0	0	0	2
40-44	0	1	0	0	0	1
45-49	1	0	0	0	0	1
50-54	1	1	1	1	0	4
55-59	3	0	2	1	1	7
60-64	2	1	4	1	0	8
65-69	3	4	3	1	3	14
70-74	13	4	2	1	0	20
75+	17	6	3	2	1	29
Unknown	0	2	0	0	0	2
TOTAL	**43**	**19**	**15**	**7**	**5**	**89**

FIGURE 28: Age-adjusted Incidence Rates (World Standard Population), Rectum Cancer in Males, 1998-2000

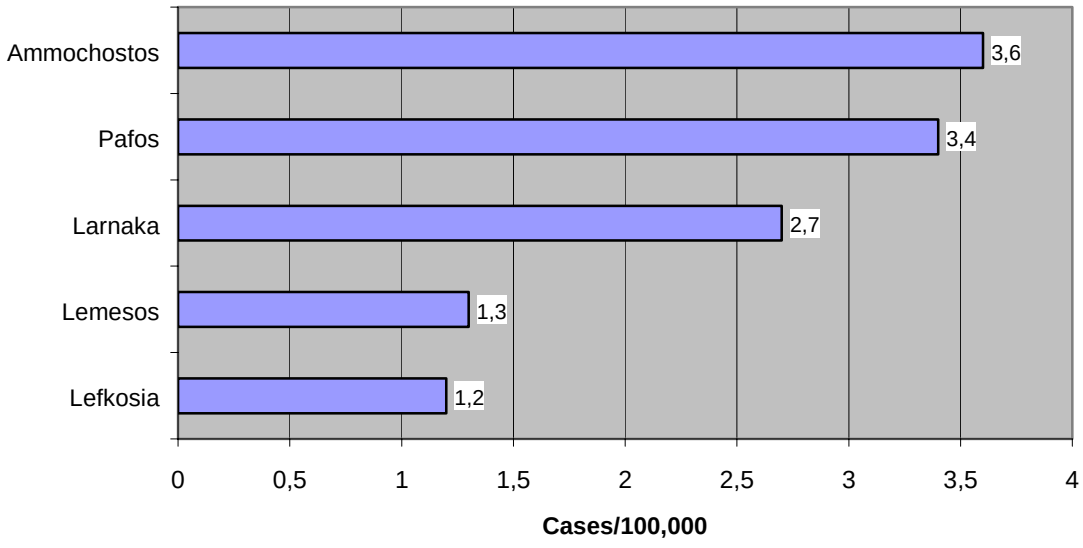


When adjusted by age rectum cancer in males is more common in Ammochostos followed by Larnaka, Lefkosia, Pafos and Lemesos (figure 28 and table 57) while in females is more common in Ammochostos followed by Pafos, Larnaka, Lemesos and Lefkosia (figure 29 and table 58).

Table 58: Rectum Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	1	1
35-39	0	0	0	0	0	0
40-44	2	1	0	0	0	3
45-49	1	0	0	0	1	2
50-54	2	1	3	0	1	7
55-59	2	2	2	2	0	8
60-64	5	2	1	0	2	10
65-69	1	1	8	2	0	12
70-74	1	3	1	0	0	5
75+	9	7	3	3	1	23
Unknown	0	1	0	0	0	1
TOTAL	**23**	**18**	**18**	**7**	**6**	**72**

FIGURE 29: Age-adjusted Incidence Rates (World Standard Population), Rectum Cancer in Females, 1998-2000



Morphology

The majority (91%) of tumors of the rectum were adenocarcinomas.

Microscopic Verification

More than 99% of the rectal cancer cases were microscopically verified.

Table 59: Cancer of Rectum: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	1	0
1 Localized only	17(38,6%)	12(21,0%)	17(23,6%)
2 Regional by direct extension only	12(27,3%)	25(43,9%)	24(33,3%)
3 Regional lymph nodes involved only	1(2,3%)	0(0,0%)	3(4,2%)
4 Regional by both direct extension & lymph nodes	8(18,2%)	11(19,3%)	18(25,0%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	4(9,1%)	6(10,5%)	8(11,1%)
9 Unknown	2(4,5%)	3(5,3%)	2(2,8%)
TOTAL INVASIVE	**44(100%)**	**57(100%)**	**72(100%)**

Most of the rectum cancer cases are diagnosed when localized and regional by direct extension only. (Table 59)

Leukemia

- On average, 58 leukemia cases were registered per year.
- More common in females than in males.
- Half of the cases were under 60 years in males, 55 years in females.

On average, 58 leukemia cases were registered each year. Leukemia accounted for over 4,5% of all cancers in males and 3% in females.

Table 60: Summary Statistics

YEAR	Males			Females		
INCIDENCE	**1998**	**1999**	**2000**	**1998**	**1999**	**2000**
Incident Cases	31	44	31	26	23	20
Crude Rate (per 100,000)	9,2	13,0	9,0	7,5	6,6	5,6
WASR (per 100,000)	8,3	11,3	7,6	7,0	6,2	5,0
% of All Cancers	4,2	5,7	3,6	3,4	3,1	2,6
% Microscopically Verified	96,8	100,0	96,8	96,2	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,20 Female 0,18

WASR = Rates standardized for age to the world standard population.

Age Profile

Leukemia was presented at an earlier age in females (55 years) than in males (60 years). (Figure 30, table 61)

FIGURE 30: Age Distribution for Leukemia Cases, 1998-2000

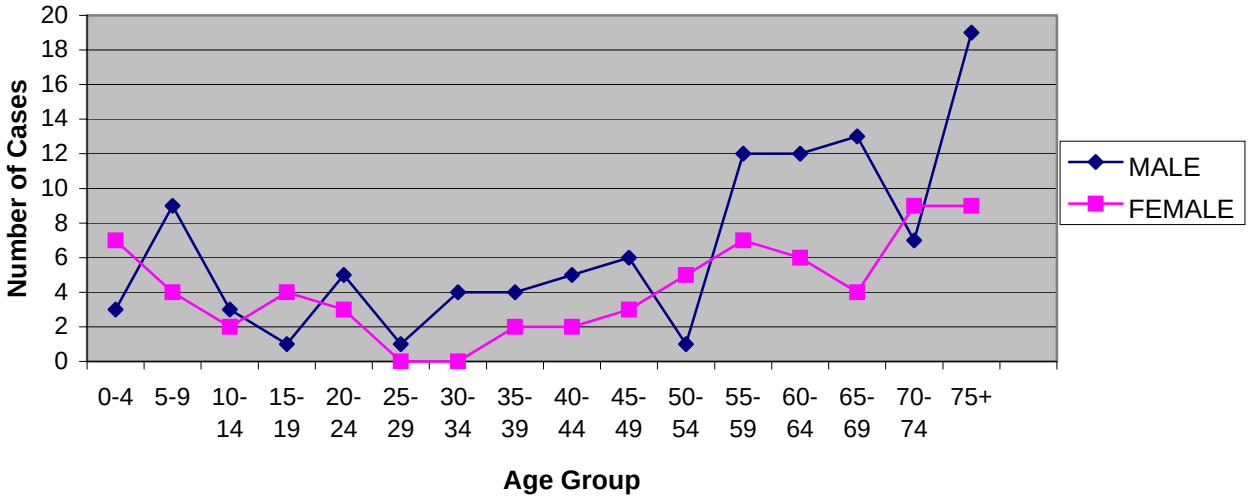


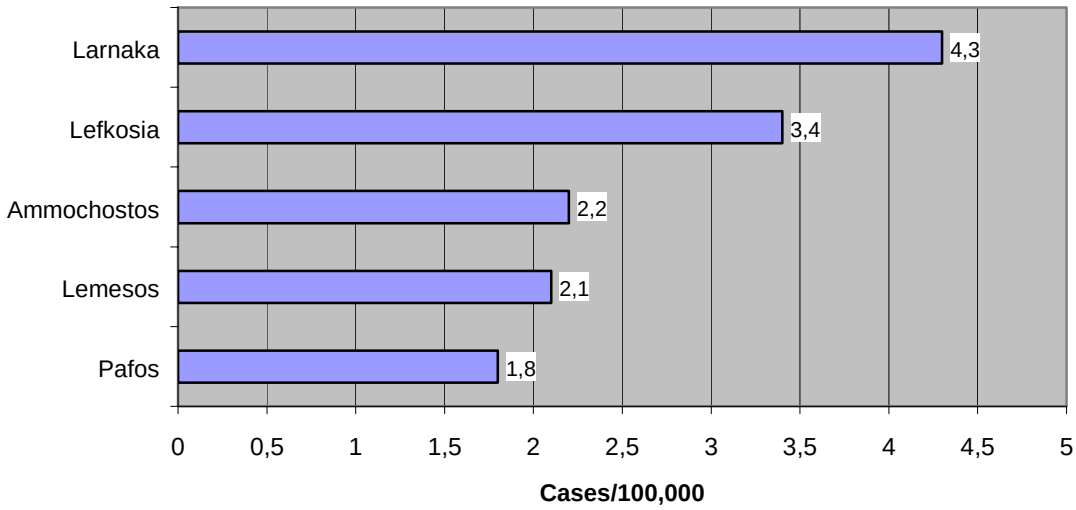
Table 61: Age Specific Incidence Rate of Leukemia Cases per 100,000 population (ASIR), 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	1	4,0	4	16,8	5	10,2	1	4,1	3	13,0	4	8,4	1	4,2	0	0,0	1	2,2
5-9	3	10,6	2	7,6	5	9,1	5	17,7	1	3,7	6	10,9	1	3,6	1	3,8	2	3,7
10-14	1	3,5	0	0,0	1	1,8	1	3,5	1	3,7	2	3,6	1	3,5	1	3,7	2	3,6
15-19	0	0,0	0	0,0	0	0,0	1	3,5	2	7,1	3	5,3	0	0,0	2	7,0	2	3,5
20-24	1	4,2	0	0,0	1	2,0	1	4,1	3	11,7	4	8,0	3	11,7	0	0,0	3	5,7
25-29	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	4,4	0	0,0	1	2,1
30-34	1	4,1	0	0,0	1	2,0	2	8,3	0	0,0	2	4,0	1	4,2	0	0,0	1	2,0
35-39	1	3,8	1	3,7	2	3,7	1	3,8	0	0,0	1	1,9	2	7,8	1	3,7	3	5,7
40-44	1	4,1	2	8,3	3	6,2	3	12,0	0	0,0	3	6,0	1	3,9	0	0,0	1	1,9
45-49	2	9,2	1	4,5	3	6,8	2	9,0	0	0,0	2	4,5	2	8,9	2	8,8	4	8,8
50-54	0	0,0	1	5,1	1	2,5	1	5,0	2	9,9	3	7,4	0	0,0	2	9,6	2	4,9
55-59	7	42,7	4	23,9	11	33,1	3	17,4	3	17,1	6	17,2	2	11,0	0	0,0	2	5,5
60-64	2	15,0	1	6,9	3	10,8	5	36,5	0	0,0	5	17,7	5	35,7	5	33,5	10	34,6
65-69	5	46,3	2	15,2	7	29,3	6	54,1	0	0,0	6	24,8	2	17,4	2	15,0	4	16,1
70-74	2	22,2	4	36,0	6	29,8	4	44,0	4	35,4	8	39,0	1	10,8	1	8,7	2	9,7
75+	3	21,8	3	16,5	6	18,7	8	56,8	4	21,6	12	36,7	8	56,2	2	10,5	10	30,1
Unknown	1		1		2		0		0		0		0		1		1	

Table 62: Leukemia Cases by District in Males 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	2	6	3	3	1	15
15-19	1	0	0	0	0	1
20-24	3	0	2	0	0	5
25-29	1	0	0	0	0	1
30-34	1	0	1	0	1	3
35-39	3	0	1	0	0	4
40-44	1	2	1	1	0	5
45-49	3	1	1	0	0	5
50-54	0	0	1	0	0	1
55-59	6	2	2	0	1	11
60-64	8	3	1	0	0	12
65-69	8	0	3	0	0	11
70-74	3	0	4	0	0	7
75+	6	7	4	1	1	19
Unknown	1	0	0	0	0	1
TOTAL	**47**	**21**	**24**	**5**	**4**	**101**

FIGURE 31: Age-adjusted Incidence Rates (World Standard Population), of Leukemia in Males, 1998-2000

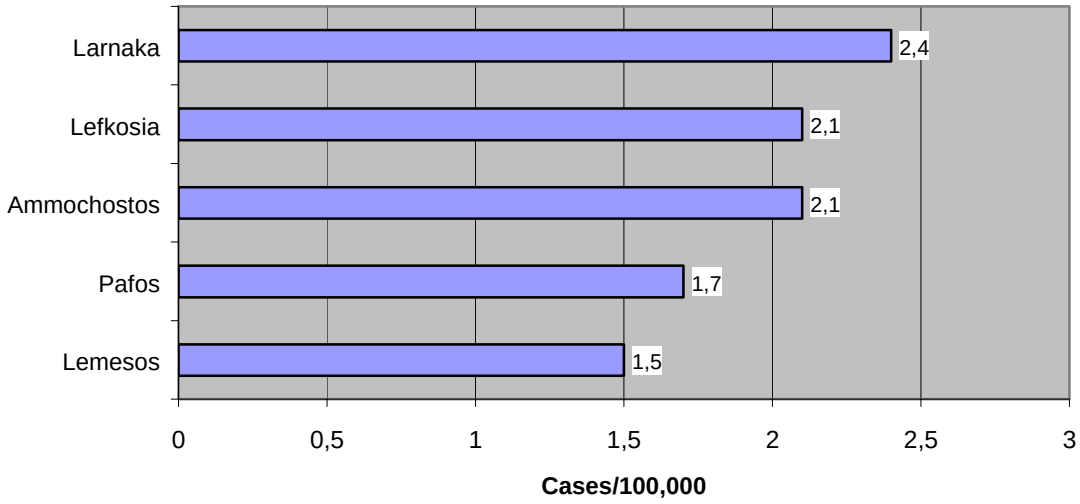


When adjusted by age, leukemia in males was more common in Larnaka district, followed by Lefkosia, Ammochostos, Lemesos and Pafos (figure 31), while in females was more common in Larnaka followed by Lefkosia, Ammochostos, Pafos and Lemesos (figure 32).

Table 63: Leukemia Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	5	2	4	1	1	13
15-19	2	1	1	0	0	4
20-24	0	1	0	1	1	3
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	0	1	0	0	2
40-44	2	0	0	0	0	2
45-49	0	0	1	1	0	2
50-54	3	2	0	0	0	5
55-59	3	1	2	0	0	6
60-64	3	3	0	0	0	6
65-69	2	2	0	0	0	4
70-74	6	0	1	1	1	9
75+	5	1	3	0	0	9
Unknown	0	1	0	0	0	1
TOTAL	**32**	**14**	**13**	**4**	**3**	**66**

FIGURE 32: Age-adjusted Incidence Rates (World Standard Population), of Leukemia in Females, 1998-2000



Morphology

A total of 98,1% of leukemia diagnosed in males and 98,6% diagnosed in females have histological verification. The majority of tumors (75%) were classified as chronic lymphocytic leukemia (28%), acute myeloid leukemia (25%) and acute lymphoblastic leukemia (22%).

Microscopic Verification

The proportion of microscopically cases was about 99%.

Cancer of the Corpus Uteri

- On average, 55 cancers of the corpus uteri were registered per year.
- Over half of the cases occurred under the age of 65 years of age.
- More than 7% of female cancer.

On average, 55 corpus uteri cancer cases were registered each year. It was the 3rd most commonly diagnosed cancer in females (excluding NMS). It accounts for more than 7% of female cancers.

Table 65: Summary Statistics

YEAR INCIDENCE	1998	1999	2000
Incident Cases	49	47	70
Crude Rate (per 100,000)	14,1	13,4	19,7
WASR (per 100,000)	10,5	10,3	14,4
% of All Female Cancers	6,4	6,3	9,2
% Microscopically Verified	100,0	100,0	98,6

Cumulative Risk 1998-2000 (0-74) (%) Female 0,50

WASR= Rates Standardized for age to the world standard population.

Age Profile

Over half of the cases of corpus uteri were less than 60 years of age. (Figure 33)

FIGURE 33: Age Distribution of Corpus Uteri Cancer Cases, 1998-2000

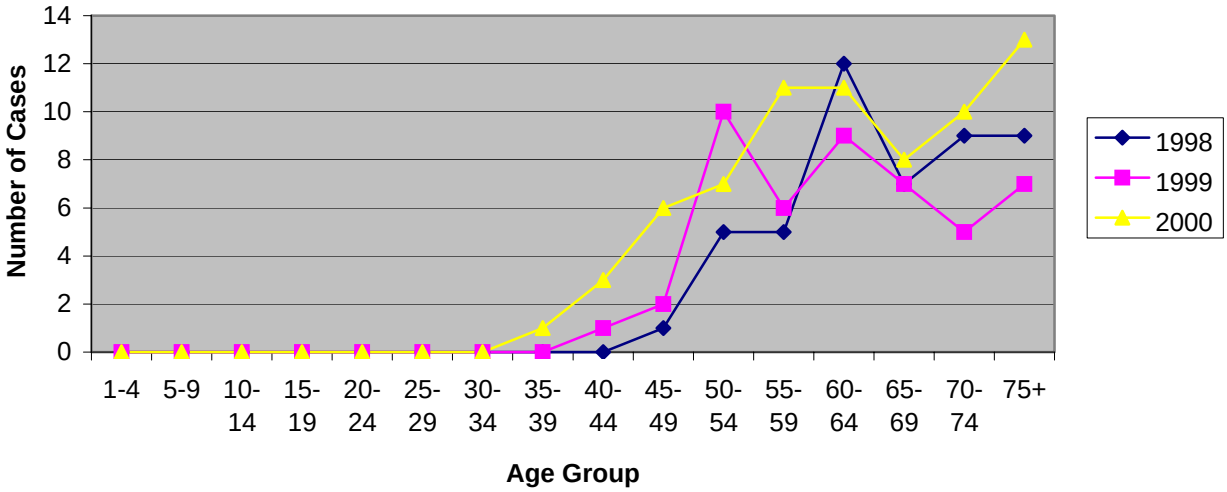


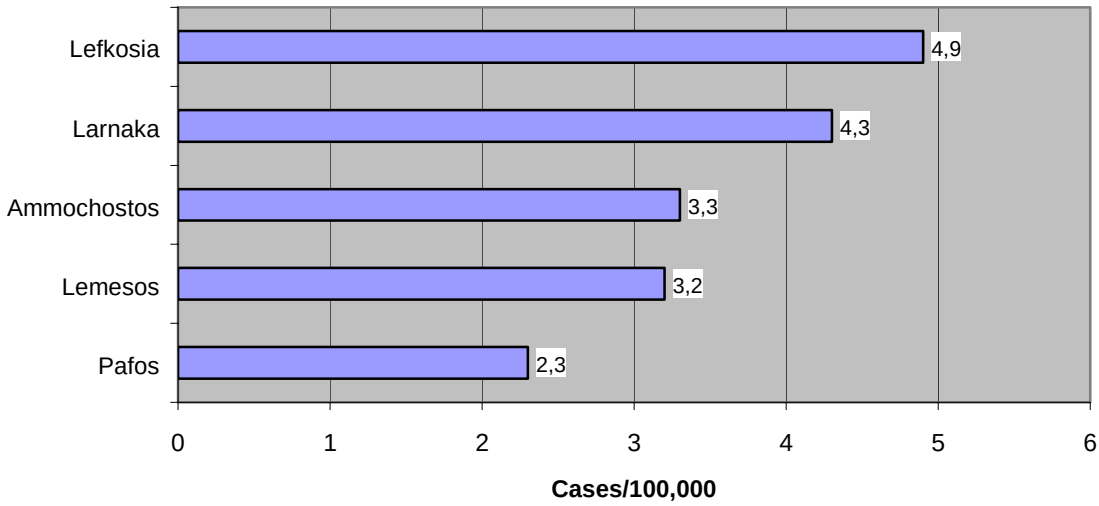
Table 66: Age Specific Incidence rate per 100,000 population (ASIR) of Corpus Uteri Cancer Cases 1998-2000

Age Group	1998		1999		2000	
	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	0	0,0
30-34	0	0,0	0	0,0	0	0,0
35-39	0	0,0	0	0,0	1	3,7
40-44	0	0,0	1	4,0	3	11,6
45-49	1	4,5	2	8,9	6	26,4
50-54	5	25,3	10	49,3	7	33,6
55-59	5	29,8	6	34,1	11	59,7
60-64	12	83,4	9	61,7	11	73,7
65-69	7	53,5	7	53,5	8	60,0
70-74	9	81,1	5	44,3	10	86,8
75+	9	49,5	7	37,7	13	68,3
Unknown	1		0		0	
TOTAL	49		47		70	

Table 67: Corpus Uteri Cancer Cases by District, 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	0	0	0	0	1
40-44	3	1	0	0	0	4
45-49	5	0	3	1	0	9
50-54	11	4	3	1	3	22
55-59	14	5	3	0	0	22
60-64	12	10	5	4	1	32
65-69	8	5	6	0	1	20
70-74	13	6	3	1	0	23
75+	18	6	4	0	0	28
Unknown	0	1	0	0	0	1
TOTAL	**85**	**38**	**27**	**7**	**5**	**162**

FIGURE 34: Age-adjusted Incidence Rates (World Standard Population), Corpus Uteri Cancer, 1998-2000



When adjusted by age, corpus uteri cancer was more common in Lefkosia followed by Larnaka, Ammochostos, Lemesos and Pafos. (Figure 34)

Morphology

About 84% of invasive cancers were adenocarcinomas.

Microscopic Verification

More than 99% of the corpus uteri cancers were microscopically verified.

Table 68: Cancer of Corpus Uteri: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	2	1	3
1 Localized only	43(87,8%)	34(72,4%)	53(75,6%)
2 Regional by direct extension only	3(6,1%)	8(17,0%)	9(12,9%)
3 Regional lymph nodes involved only	0(0,0%)	1(2,1%)	0(0,0%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	0(0,0%)	2(2,9%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	3(6,1%)	3(6,4%)	6(8,6%)
9 Unknown	0(0,0%)	1(2,1%)	0(0,0%)
TOTAL INVASIVE	**49(100%)**	**47(100%)**	**70(100%)**

Most of the cases (about 43%) are diagnosed at an early stage, when localized. (Table 68)

Cancer of the Stomach

- On average, 49 cases of cancer of the stomach were registered per year.
- More common in males than in females.
- Half of the cases were over 65 years of age in both sexes.

On average, 49 cancers of the stomach were registered each year. Cancer of the stomach accounted for about 3,4% of all cancers in males and 2,9% in females. It was the 8th most common cancer in males and the 10th most common in females.

Table 69: Summary Statistics

YEAR	Males			Females		
INCIDENCE	**1998**	**1999**	**2000**	**1998**	**1999**	**2000**
Incident Cases	25	28	27	25	18	23
Crude Rate (per 100,000)	7,4	8,2	7,9	7,2	5,1	6,5
WASR (per 100,000)	5,0	6,0	6,2	4,8	3,4	4,1
% of All Cancers	3,4	3,6	3,1	3,3	2,4	3,0
%Microscopically Verified	98,0	100,0	100,0	100,0	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,22 Female 0,15

WASR = Rates standardised for age to the world standard population.

Age Profile

The median age at diagnosis was in both sexes 65 years of age. A total of 32,1% of stomach cancers in males was in patients over 75 years of age, while over half (55,9%) of the females were diagnosed over the age of 65. Age specific rates were highest in the oldest age group for both sexes. (Figure 35)

FIGURE 35: Age Distribution of Stomach Cancer Cases, 1998-2000

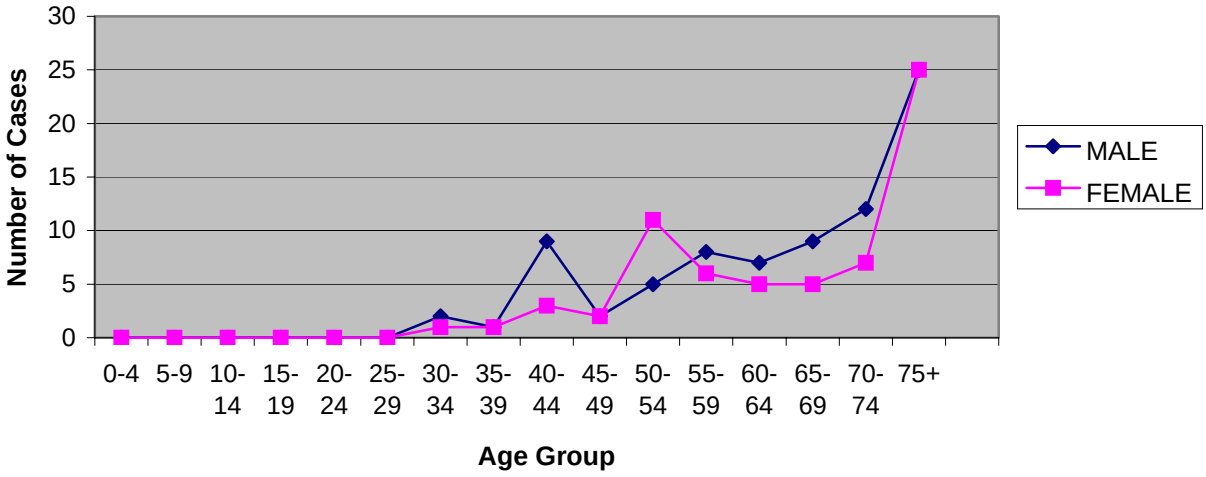


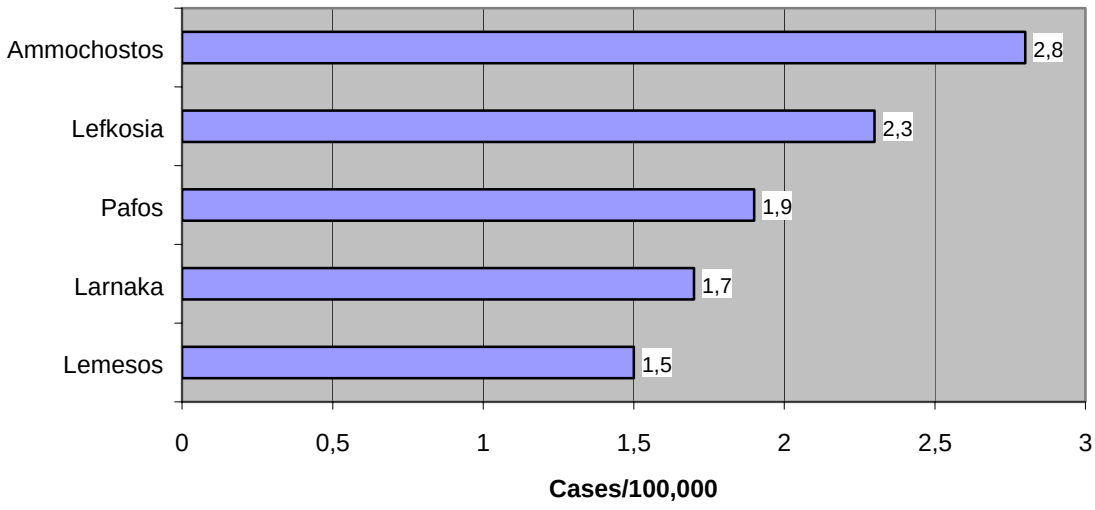
Table 70: Age Specific Incidence Rate of Stomach Cancer per 100,000 population (ASIR) 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
30-34	0	0,0	1	3,9	1	2,0	1	4,2	0	0,0	1	2,0	1	4,2	0	0,0	1	2,0
35-39	1	3,8	1	3,7	2	3,8	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
40-44	3	12,4	2	8,3	5	10,4	1	4,0	1	4,0	2	4,0	5	19,4	0	0,0	5	9,7
45-49	0	0,0	0	0,0	0	0,0	1	4,5	1	4,4	2	4,5	1	4,4	1	4,4	2	4,4
50-54	1	5,1	4	20,2	5	12,7	2	10,0	2	9,9	4	9,9	2	9,8	5	24,0	7	17,0
55-59	1	6,1	2	11,9	3	9,0	4	23,3	1	5,7	5	14,4	3	16,5	3	16,3	6	16,4
60-64	1	9,3	2	13,9	3	10,8	3	21,9	2	13,7	5	17,7	3	21,4	1	6,7	4	13,8
65-69	2	18,5	1	7,6	3	12,6	3	27,0	2	15,3	5	20,7	4	34,7	2	15,0	6	24,2
70-74	4	44,5	3	27,0	7	34,8	4	44,0	3	26,6	7	34,3	4	43,4	1	8,7	5	24,2
75+	12	87,0	9	49,5	21	65,6	9	63,9	6	32,3	15	45,9	4	28,2	10	52,5	14	42,2
Unknown	0		0		0		0		0		0		0		0		1	

Table 71: Stomach Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	1	0	0	0	2
35-39	0	1	0	0	0	1
40-44	4	1	1	2	1	9
45-49	2	0	0	0	0	2
50-54	4	0	1	0	0	5
55-59	5	1	2	0	0	8
60-64	2	4	1	0	0	7
65-69	5	0	1	2	1	9
70-74	3	4	1	2	2	12
75+	12	5	4	1	1	23
Unknown	0	0	0	0	0	0
TOTAL	**38**	**17**	**11**	**7**	**5**	**78**

FIGURE 36: Age-adjusted Incidence Rate (World Standard Population), of Stomach Cancer in Males, 1998-2000

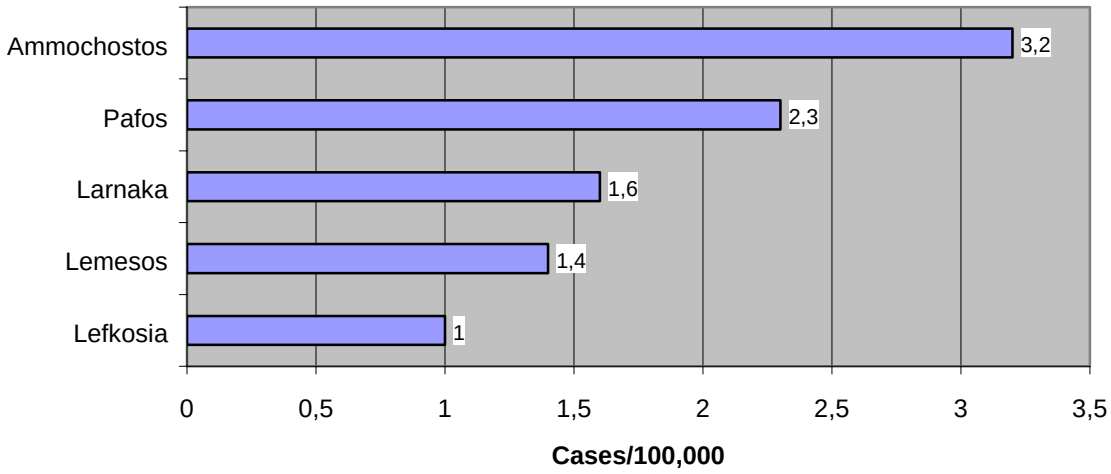


When adjusted by age, stomach cancer in males was more common in Ammochostos district, followed by Lefkosia, Pafos, Larnaka and Lemesos (figure 36), while in females was more common in Ammochostos followed by Pafos, Larnaka, Lemesos and Lefkosia (figure 37).

Table 72: Stomach Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	0	0	0	1
35-39	1	0	0	0	0	1
40-44	0	2	0	0	1	3
45-49	1	1	0	0	0	2
50-54	0	3	4	1	3	11
55-59	2	3	1	0	0	6
60-64	2	1	2	0	0	5
65-69	1	2	0	1	0	4
70-74	3	1	1	1	0	6
75+	9	4	2	2	2	19
Unknown	0	0	0	0	0	0
TOTAL	**20**	**17**	**10**	**5**	**6**	**58**

FIGURE 37: Age-adjusted Incidence Rate (World Standard Population), of Stomach Cancer in Females, 1998-2000



Morphology

A total of 98,8% of tumours diagnosed in males and 100% of tumours diagnosed in females have histological verification. Adenocarcinoma was the most commonly diagnosed tumour (89% of males and 84% of females).

Table 73: Cancer of Stomach: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In Situ	0	0	0
1 Localized only	31(55,4%)	17(33,3%)	19(33,9%)
2 Regional by direct extension only	5(8,9%)	11(21,6%)	4(7,1%)
3 Regional lymph nodes involved only	13(23,2%)	9(17,6%)	0(0,0%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	7(13,7%)	15(26,8%)
5 Regional not otherwise specified	0(0,0%)	1(2,0%)	2(3,6%)
7 Distant site(s)/node(s) involved	7(12,5%)	4(7,8%)	15(26,8%)
9 Unknown	0(0,0%)	2(4,0%)	1(1,8%)
TOTAL INVASIVE	**56(100%)**	**51(100%)**	**56(100%)**

Most of the cancer cases (about 40%) are diagnosed when localized. (Table 73)

Cancer of the Thyroid

- On average, 44 cancers of the thyroid were registered per year.
- More common in females than in males.
- Half of the cases occurred under the age of 50 years in males and 40 years of age in females.

On average, 44 cancers of the thyroid were registered each year. Cancer of the thyroid accounted for about 1,1% of all cancers in males, 4.6% in females.

Table 74: Summary Statistics

YEAR	Males			Females		
INCIDENCE	**1998**	**1999**	**2000**	**1998**	**1999**	**2000**
Incident Cases	10	7	10	40	32	32
Crude Rate (per 100,000)	3,0	2,1	2,9	11,5	9,1	9,0
WASR (per 100,000)	2,7	1,8	2,8	9,9	8,2	8,0
% of All Cancers	1,4	0,9	1,2	5,2	4,3	4,2
% Microscopically Verified	100,0	100,0	100,0	100,0	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,08 Female 0,25

WASR = Rates standardized for age to the world standard population.

Age Profile

The median age at diagnosis was younger in females (40 years) than males (50 years). (Figure 38)

FIGURE 38: Age Distribution of Thyroid Cancer Cases, 1998-2000

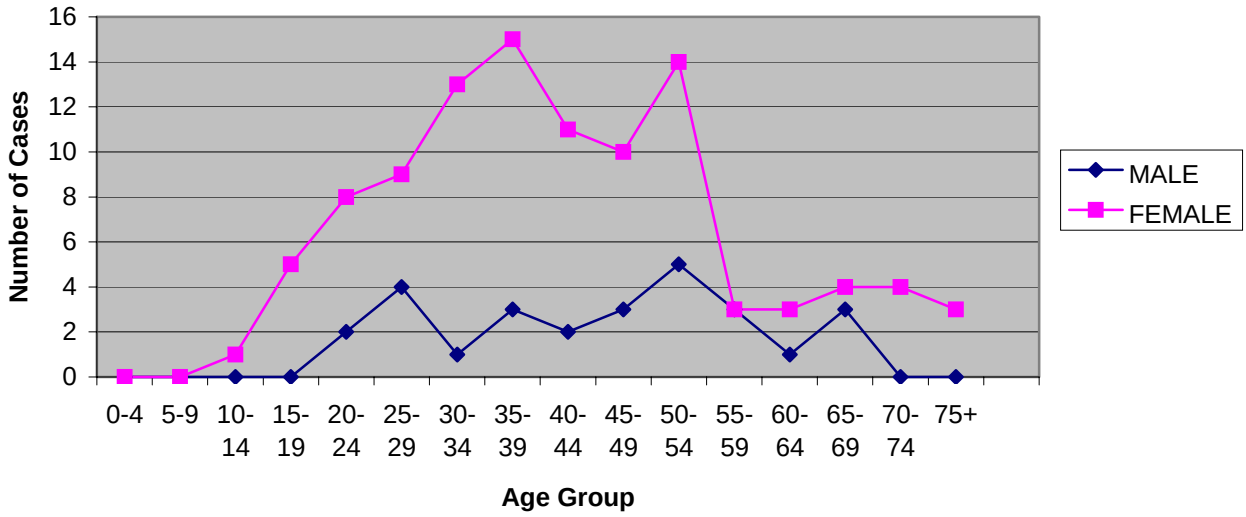


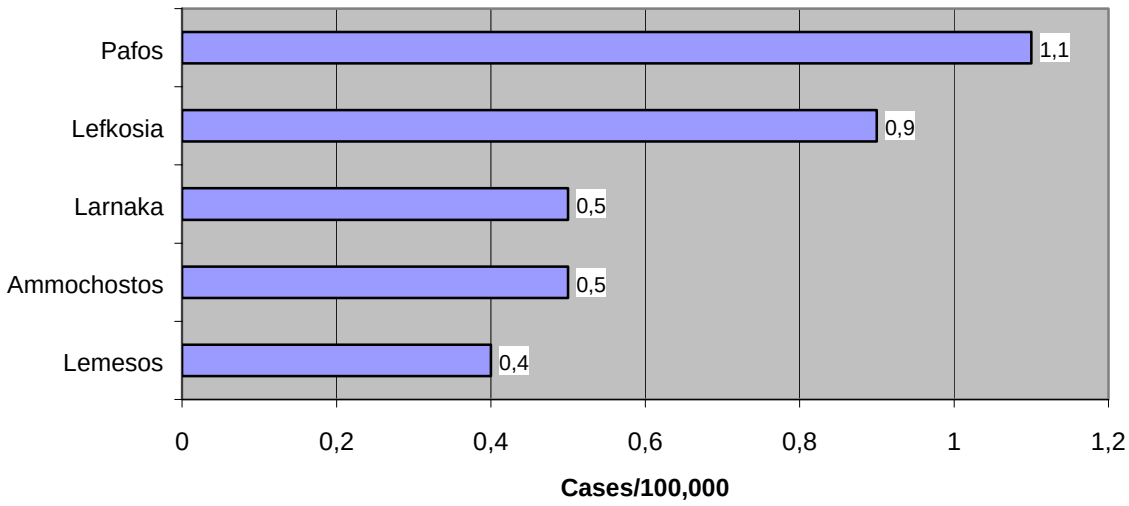
Table 75: Age Specific Incidence Rate of Thyroid Cancer Cases per 100,000 population (ASIR), 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASI	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	1	3,7	1	1,8	0	0,0	0	0,0	0	0,0
15-19	0	0,0	1	3,7	1	1,8	0	0,0	1	3,6	1	1,7	0	0,0	3	10,6	3	5,2
20-24	0	0,0	2	8,0	2	4,1	0	0,0	3	11,7	3	6,0	2	7,8	3	11,1	5	9,5
25-29	2	8,7	4	16,1	6	12,6	0	0,0	3	11,9	3	6,2	2	8,8	2	7,9	4	8,3
30-34	0	0,0	6	23,4	6	12,0	1	4,2	4	15,7	5	10,1	0	0,0	3	11,6	3	6,1
35-39	1	3,8	6	22,3	7	13,2	0	0,0	3	11,2	3	5,7	2	7,7	6	22,4	8	15,2
40-44	0	0,0	5	20,8	5	10,4	1	4,0	4	16,1	5	10,0	1	3,9	2	7,8	3	5,8
45-49	0	0,0	2	9,1	2	4,6	1	4,5	5	22,2	6	13,5	2	8,9	3	13,2	5	11,1
50-54	3	15,4	6	30,3	9	22,9	1	5,0	4	19,7	5	12,4	1	4,9	4	19,2	5	12,2
55-59	2	12,2	1	6,0	3	9,0	1	5,8	0	0,0	1	2,9	0	0,0	2	10,8	2	5,5
60-64	0	0,0	2	13,9	2	7,2	1	7,3	0	0,0	1	3,5	0	0,0	1	6,7	1	3,5
65-69	2	18,5	1	7,6	3	12,6	1	9,0	1	7,6	2	8,2	0	0,0	2	15,0	2	8,1
70-74	0	0,0	2	18,0	2	9,9	0	0,0	1	8,9	1	4,9	0	0,0	1	8,7	1	4,8
75+	0	0,0	2	11,0	2	6,2	0	0,0	1	5,4	1	3,0	0	0,0	0	0,0	0	0,0
Unknown	0		0		0		0		1		1		0		0		0	

Table 76: Thyroid Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	2	0	0	0	0	2
25-29	1	0	0	0	0	1
30-34	0	0	0	0	1	1
35-39	0	2	1	0	0	3
40-44	1	1	0	0	0	2
45-49	1	0	0	1	0	2
50-54	3	0	1	1	0	5
55-59	2	1	0	0	0	3
60-64	1	0	0	0	0	1
65-69	1	0	1	1	0	3
70-74	0	0	0	0	0	0
75+	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
TOTAL	**12**	**4**	**3**	**3**	**1**	**23**

FIGURE 39: Age-adjusted Incidence Rates (World Standard Population), Thyroid Cancer in Males, 1998-2000

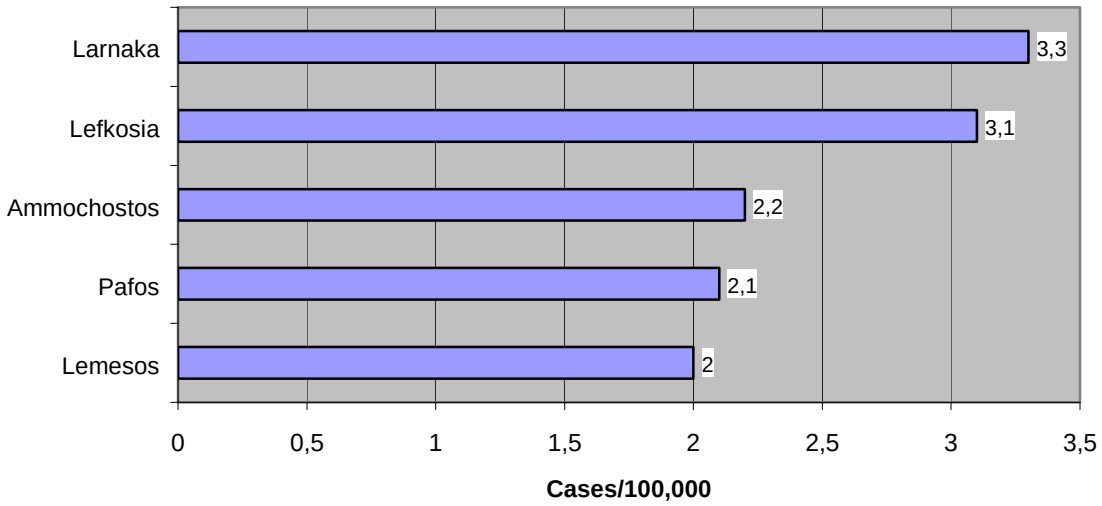


When adjusted by age, thyroid cancer in males was more common in Pafos district followed by Lefkosia, Larnaka, Ammochostos and Lemesos (figure 39), while in females was more common in Larnaka followed by Lefkosia, Ammochostos, Pafos and Lemesos (figure 40).

Table 77: Thyroid Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	4	0	1	0	0	5
20-24	4	1	1	0	0	6
25-29	1	4	1	0	0	6
30-34	2	4	3	1	1	11
35-39	6	2	4	1	2	15
40-44	3	3	2	2	0	10
45-49	6	0	2	0	0	8
50-54	8	3	0	0	1	12
55-59	1	1	1	0	0	3
60-64	1	0	2	0	0	3
65-69	3	0	1	0	0	4
70-74	3	1	0	0	0	4
75+	1	1	0	1	0	3
Unknown	0	0	0	0	0	0
TOTAL	**43**	**20**	**18**	**5**	**4**	**90**

FIGURE 40: Age-adjusted Incidence Rates (World Standard Population), Thyroid Cancer in Females, 1998-2000



Morphology

A total of 96% of thyroid cancer diagnosed in males and 100% of thyroid cancers diagnosed in females have histological verification. Papillary carcinoma was the most commonly diagnosed tumor (89% of males and 83% of females).

Table 78: Cancer of Thyroid: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	0	0
1 Localized only	44(88,0%)	32(82,1%)	38(90,4%)
2 Regional by direct extension only	0(0,0%)	2(5,1%)	2(4,8%)
3 Regional lymph nodes involved only	5(10,0%)	3(7,7%)	0(0,0%)
4 Regional by both direct extension & lymph nodes	1(2,0%)	2(5,1%)	1(2,4%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	0(0,0%)	0(0,0%)	0(0,0%)
9 Unknown	0(0,0%)	0(0,0%)	1(2,4%)
TOTAL INVASIVE	**50(100%)**	**39(100%)**	**42(100%)**

Over 65% of the Thyroid cancers are diagnosed when localized. (Table 78)

Cancer of the Brain

- On average, 38 brain cancer cases were registered per year.
- More common in males than in females.
- Half of the cases were over 55 years in both sexes

On average, 38 brain cancer cases were registered each year. Brain cancer accounted for over 2,7% of all cancers in males and 2,2% in females.

Table 79: Summary Statistics

YEAR	Males			Females		
INCIDENCE	1998	1999	2000	1998	1999	2000
Incident Cases	23	17	24	15	16	19
Crude Rate (per 100,000)	6,8	5,0	7,0	4,3	4,6	5,3
WASR (per 100,000)	6,1	4,5	6,6	3,8	4,3	4,6
% of All Cancers	3,0	2,1	2,6	2,0	2,2	2,4
% Microscopically Verified	82,6	70,6	87,5	100,0	81,2	73,7

Cumulative Risk 1998-2000 (0-74) (%) Male 0,19 Female 0,14

WASR = Rates standardized for age to the world standard population.

Age Profile

The median age at diagnosis was the same in males and females, about 55 years of age. (Figure 41)

FIGURE 41: Age Distribution of Brain Cancer Cases, 1998-2000

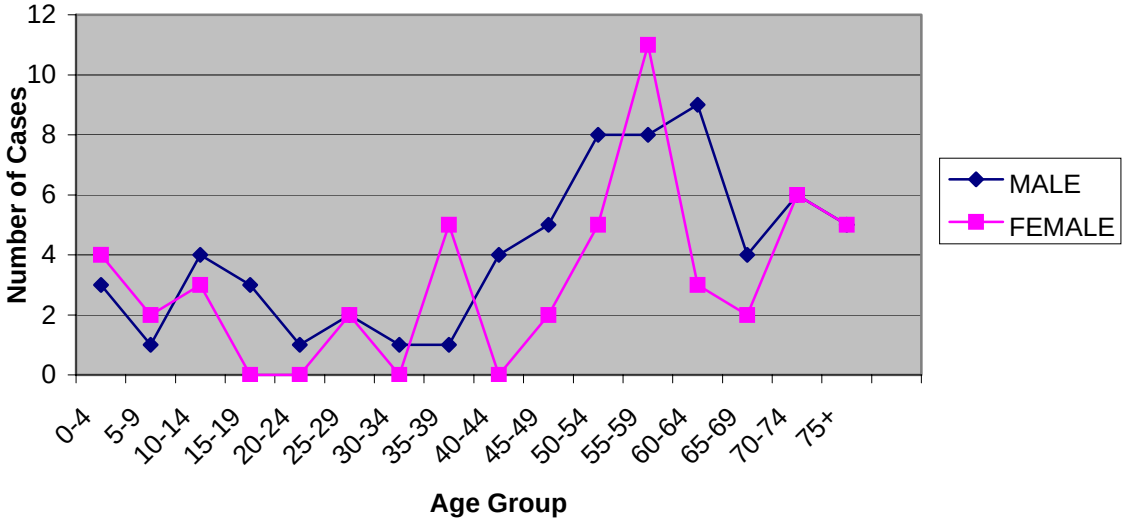


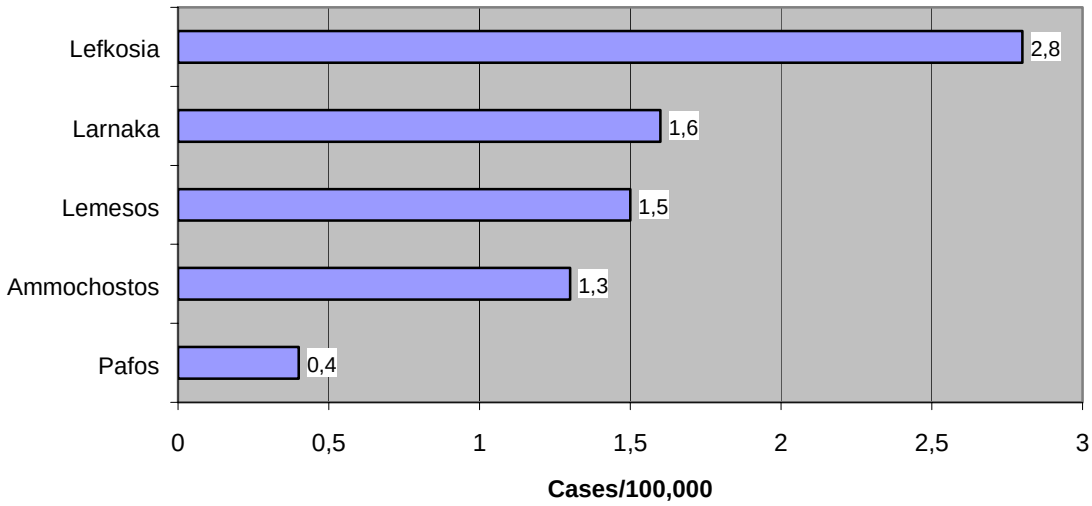
Table 80: Age Specific Incidence Rate of Brain Cancer Cases per 100,000 population (ASIR) 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	1	4,0	1	4,2	2	4,1	0	0,0	2	8,7	2	4,2	2	8,5	1	4,4	3	6,5
5-9	0	0,0	1	3,8	1	1,8	0	0,0	1	3,7	1	1,8	1	3,6	0	0,0	1	1,8
10-14	1	3,5	0	0,0	1	1,8	2	7,0	2	7,5	4	7,2	1	3,5	1	3,7	2	3,6
15-19	1	3,6	0	0,0	1	1,8	1	3,5	0	0,0	1	1,7	1	3,4	0	0,0	1	1,7
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	1	4,4	1	4,0	2	4,2	0	0,0	0	0,0	0	0,0	1	4,4	1	3,9	2	4,1
30-34	1	4,1	0	0,0	1	2,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
35-39	0	0,0	1	3,7	1	1,9	1	3,8	4	14,9	5	9,4	0	0,0	0	0,0	0	0,0
40-44	2	8,3	0	0,0	2	4,1	0	0,0	0	0,0	0	0,0	2	7,8	0	0,0	2	3,9
45-49	3	13,8	0	0,0	3	6,8	0	0,0	0	0,0	0	0,0	2	8,9	2	8,8	4	8,8
50-54	2	10,3	2	10,1	4	10,2	3	15,0	0	0,0	3	7,4	3	14,7	3	14,4	6	14,6
55-59	3	18,3	2	11,9	5	15,1	2	11,6	4	22,7	6	17,2	3	16,5	5	27,1	8	21,9
60-64	3	22,6	2	13,9	5	18,0	4	29,2	0	0,0	4	14,1	2	14,3	1	6,7	3	10,4
65-69	0	0,0	1	7,6	1	4,2	2	18,0	0	0,0	2	8,2	2	17,4	1	7,5	3	12,1
70-74	2	22,2	3	27,0	5	24,9	1	11,0	1	8,9	2	9,7	3	32,5	2	17,4	5	24,1
75+	3	21,8	1	5,5	4	12,5	1	7,1	2	10,8	3	9,2	1	7,0	2	10,5	3	9,1
Unknown	0		0		0		0		0		0		0		0		0	

Table 81: Brain Cancer Cases by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	3	3	1	1	0	8
15-19	2	0	1	0	0	3
20-24	1	0	0	0	0	1
25-29	2	0	0	0	0	2
30-34	1	0	0	0	0	1
35-39	1	0	0	0	0	1
40-44	4	0	0	0	0	4
45-49	3	1	1	0	0	5
50-54	4	3	0	0	1	8
55-59	5	1	1	0	1	8
60-64	4	3	1	0	0	8
65-69	2	1	1	0	0	4
70-74	3	1	2	0	0	6
75+	3	2	0	0	0	5
Unknown	0	0	0	0	0	0
TOTAL	**38**	**15**	**8**	**1**	**2**	**64**

FIGURE 42: Age-adjusted Incidence Rates (World Standard Population), Brain Cancer in Males, 1998-2000

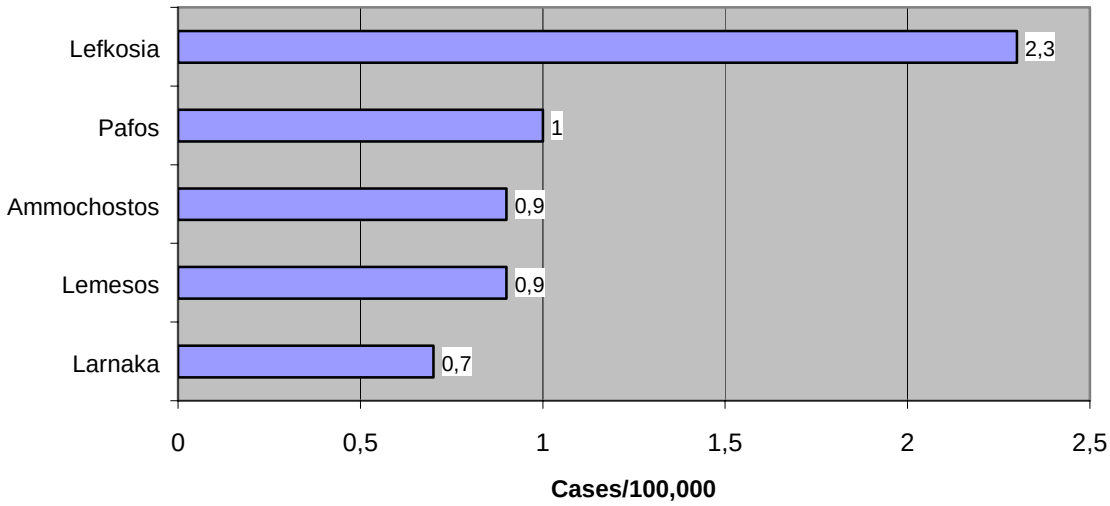


When adjusted by age, brain cancer in males was more common in Lefkosia district followed by Larnaka, Lemesos, Ammochostos and Pafos (figure 42), while in females was more common in Lefkosia followed by Pafos, Ammochostos, Lemesos and Larnaka (figure 43).

Table 82: Brain Cancer Cases by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	7	1	0	0	1	9
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	2	0	0	0	0	2
30-34	0	0	0	0	0	0
35-39	1	2	1	1	0	5
40-44	0	0	0	0	0	0
45-49	2	0	0	0	0	2
50-54	3	1	0	1	0	5
55-59	7	2	1	1	0	11
60-64	2	1	0	0	0	3
65-69	0	1	1	0	0	2
70-74	3	1	2	0	0	6
75+	5	0	0	0	0	5
Unknown	0	0	0	0	0	0
TOTAL	**32**	**9**	**5**	**3**	**1**	**50**

FIGURE 43: Age-adjusted Incidence Rates (World Standard Population), Brain Cancer in Females, 1998-2000



Morphology

A total of 81,5% of tumors diagnosed in males and 84% for tumors diagnosed in females have histological verification. The majority of tumors were classified as glioblastoma (35%) and astrocytoma (33%).

Microscopic Verification

The proportion of microscopically cases was about 83%.

Table 83: Cancer of Brain: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	0	0
1 Localized only	36(94,7%)	29(87,9%)	36(83,7%)
2 Regional by direct extension only	0(0,0%)	0(0,0%)	0(0,0%)
3 Regional lymph nodes involved only	0(0,0%)	0(0,0%)	0(0,0%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	0(0,0%)	0(0,0%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	0(0,0%)	1(3,0%)	1(2,3%)
9 Unknown	2(5,3%)	3(9,1%)	6(14,0%)
TOTAL INVASIVE	**38(100%)**	**33(100%)**	**43(100%)**

Almost over 90% of brain cancer cases are diagnosed when localized. (Table 83)

Cancer of the Ovary

- On average, 35 cases of cancer of the ovary were registered per year.
- Almost 5% of female cancers.
- Half of cases are over 60 years of age.

On average 35 ovarian cancers were registered each year. It was the fourth most commonly diagnosed cancer in females (excluding NMS). It accounts for almost 2,5% of all cancers.

Table 84: Summary Statistics

YEAR INCIDENCE	1998	1999	2000
Incident Cases	45	32	29
Crude Rate (per 100,000)	13,0	9,1	8,2
WASR (per 100,000)	9,6	7,2	6,4
% of Female Cancers	5,9	4,3	3,8
% Microscopically Verified	91,1	100,0	96,6

Cumulative Risk 1998-2000 (0-74) (%) Female 0,34

WASR= Rates standardised for age to the world standard population

Age Profile

Half of the cases were diagnosed in women over 60 years of age (figure 44). Age specific incidence rates are shown in tables 85.

FIGURE 44: Age Distribution of Ovary Cancer Cases, 1998-2000

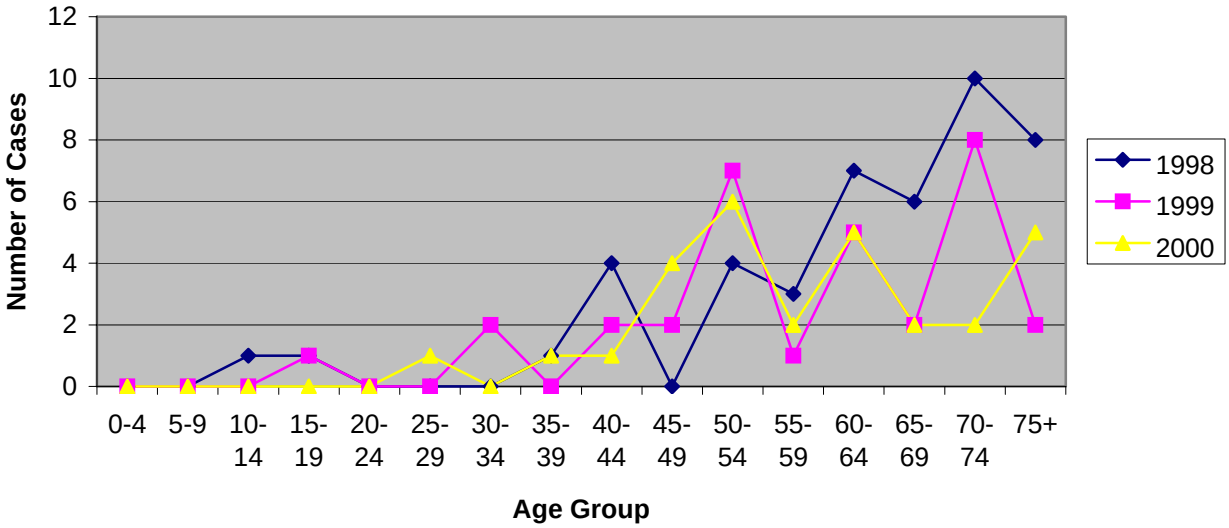


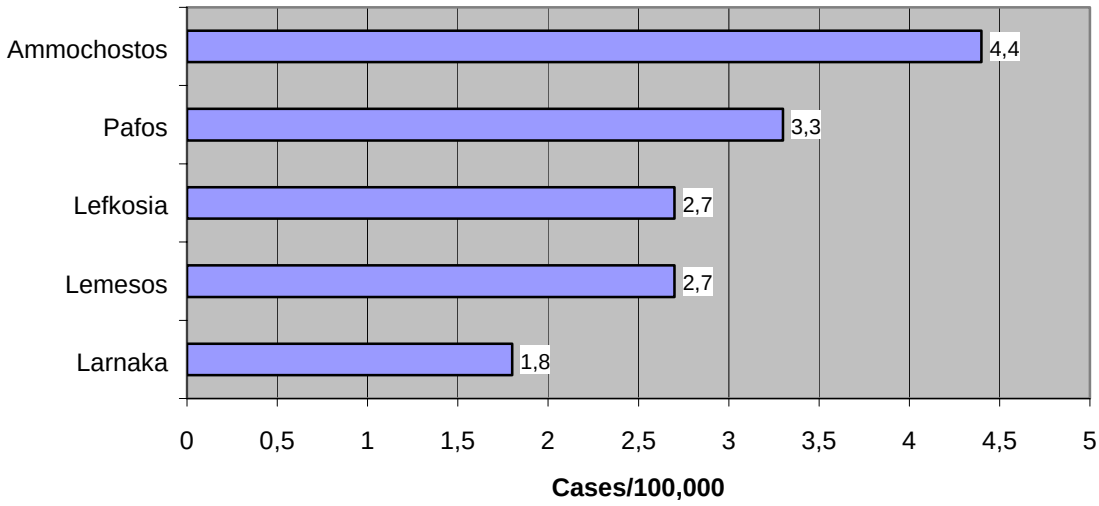
Table 85: Age Specific Incidence Rate of Ovary Cancer Cases per 100,000 population (ASIR) 1998-2000

Age Group	1998		1999		2000	
	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0
10-14	1	3,7	0	0,0	0	0,0
15-19	1	3,7	1	3,6	0	0,0
20-24	0	0,0	0	0,0	0	0,0
25-29	0	0,0	0	0,0	1	3,9
30-34	0	0,0	2	7,8	0	0,0
35-39	1	3,7	0	0,0	1	3,7
40-44	4	16,7	2	8,1	1	3,9
45-49	0	0,0	2	8,9	4	17,6
50-54	4	20,2	7	34,5	6	28,8
55-59	3	17,9	1	5,7	2	10,9
60-64	7	48,6	5	34,2	5	33,6
65-69	6	45,8	2	15,3	2	15,0
70-74	10	90,1	8	70,8	2	17,4
75+	8	44,0	2	10,8	5	26,3
Unknown	0		0		0	

Table 86: Ovary Cancer Cases by District, 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	1	1
15-19	1	0	0	1	0	2
20-24	0	0	0	0	0	0
25-29	1	0	0	0	0	1
30-34	0	2	0	0	0	2
35-39	0	0	1	0	1	2
40-44	2	1	2	1	1	7
45-49	4	2	0	0	0	6
50-54	6	5	3	2	1	17
55-59	3	0	1	1	1	6
60-64	8	7	2	0	0	17
65-69	3	5	0	1	0	9
70-74	9	7	0	2	2	20
75+	9	2	2	1	1	15
Unknown	0	0	0	0	0	0
TOTAL	**46**	**31**	**11**	**9**	**8**	**105**

FIGURE 45: Age-adjusted Incidence Rates (World Standard Population), Ovary Cancer 1998-2000



When adjusted by age, ovary cancer was more common in Ammochostos district followed by Pafos, Lefkosia, Lemesos and Larnaka (figure 45).

Morphology

On average, during the period 1998-2000, 95% tumors of the ovary had microscopic verification. The most commonly diagnosed tumour is papillary serous cystadenocarcinoma (20%). Adenocarcinoma accounted 18%, endometrioid carcinoma 10,5% and the serous adenocarcinoma 5,7%.

Microscopic Verification

Microscopically verified cases constituted 95,3% of the total ovarian cancer cases.

Table 87: Cancer of Ovary: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	0	0	0
1 Localized only	24(53,3%)	10(31,2%)	15(51,7%)
2 Regional by direct extension only	3(6,7%)	5(15,6%)	1(3,5%)
3 Regional lymph nodes involved only	3(6,7%)	1(3,1%)	0(0,0%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	3(9,4%)	0(0,0%)
5 Regional not otherwise specified	0(0,0%)	3(9,4%)	0(0,0%)
7 Distant site(s)/node(s) involved	15(33,3%)	9(28,1%)	13(44,8%)
9 Unknown	0(0,0%)	1(3,1%)	0(0,0%)
TOTAL INVASIVE	**45(100%)**	**32(100%)**	**29(100%)**

About half of the ovarian cancers are diagnosed when localized. (Table 87)

Melanoma of Skin

- On average, 25 cases melanoma of skin were registered per year.
- More common in females than in males.
- Half of the cases were over 60 years of age in males and 65 years in females.

On average, 25 cases melanoma of skin were registered each year. Melanoma of skin accounted for over 1,3% of all cancers in males, 1,9% in females. The incidence found is quite low considering the high amount of sunlight in Cyprus. Efforts shall be made to visit various dermatological clinics and investigate their practices and the possibility of excising/destroy without pathology potential melanomas.

Table 88: Summary Statistics

YEAR	Males			Females		
INCIDENCE	1998	1999	2000	1998	1999	2000
Incident Cases	9	10	12	17	11	15
Crude Rate (per 100,000)	2,7	2,9	3,5	4,9	3,1	4,2
WASR (per 100,000)	2,3	2,3	2,9	3,6	2,2	3,2
% of All Cancers	1,2	1,3	1,4	2,2	1,5	2,0
% Microscopically Verified	100,0	100,0	100,0	94,1	90,9	100,0

Cumulative Risk 1998-2000 (0-74) (%) Male 0,11 Female 0,10

WASR = Rates standardized for age to the world standard population.

Age Profile

The age at diagnosis was younger in males (60 years) than females (65 years). (Figure 46)

FIGURE 46: Age Distribution of Melanoma of Skin Cancer Cases, 1998-2000

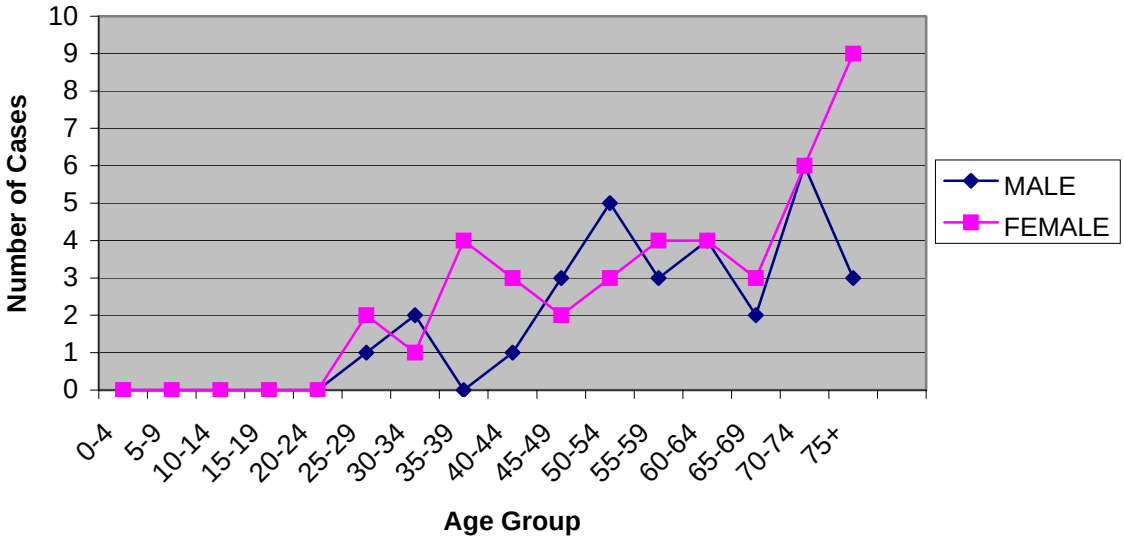


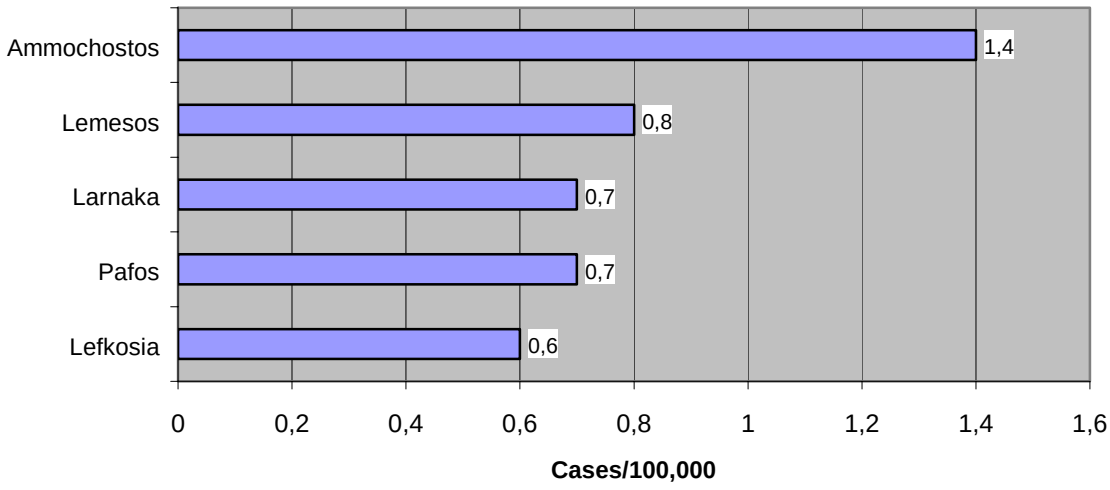
Table 89: Age Specific Incidence Rate of Skin Melanoma per 100,0000 population (ASIR), 1998-2000

Age Group	1998						1999						2000					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
25-29	1	4,4	1	4,0	2	4,2	0	0,0	0	0,0	0	0,0	0	0,0	1	3,9	1	2,1
30-34	1	4,1	1	3,9	2	4,0	1	4,2	0	0,0	1	2,0	0	0,0	0	0,0	0	0,0
35-39	0	0,0	1	3,7	1	1,9	0	0,0	3	11,2	3	5,7	0	0,0	0	0,0	0	0,0
40-44	0	0,0	2	8,3	2	4,1	1	4,0	0	0,0	1	2,0	0	0,0	1	3,9	1	1,9
45-49	2	9,2	0	0,0	2	4,6	1	4,5	1	4,4	2	4,5	0	0,0	1	4,4	1	2,2
50-54	1	5,1	1	5,1	2	5,1	1	5,0	0	0,0	1	2,5	3	14,7	2	9,6	5	12,2
55-59	1	6,1	1	6,0	2	6,0	0	0,0	1	5,7	1	2,9	2	11,0	2	10,9	4	11,0
60-64	0	0,0	2	13,9	2	7,2	1	7,3	1	6,9	2	7,1	3	21,4	1	6,7	4	13,8
65-69	1	9,3	1	7,6	2	8,4	0	0,0	1	7,6	1	4,1	1	8,7	1	7,5	2	8,1
70-74	1	11,1	2	18,0	3	14,9	3	33,0	1	8,9	4	19,5	2	21,7	3	26,0	5	24,1
75+	1	7,3	4	22,0	5	15,6	1	7,1	3	16,1	4	12,2	1	7,0	2	10,5	3	9,1
Unknown	0		1		1		1		0		1		0		1		1	

Table 90: Melanoma of Skin by District, Male 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	1	0	0	0	1
30-34	2	0	0	0	0	2
35-39	0	0	0	0	0	0
40-44	0	0	1	0	0	1
45-49	2	0	0	0	0	2
50-54	0	1	1	1	0	3
55-59	1	0	0	1	1	3
60-64	2	1	0	0	1	4
65-69	0	1	0	0	0	1
70-74	0	3	2	0	0	5
75+	2	1	0	0	0	3
Unknown	0	0	0	0	0	0
TOTAL	**9**	**8**	**4**	**2**	**2**	**25**

FIGURE 47: Age-adjusted Incidence Rates (World Standard Population), Melanoma of Skin in Males,1998-2000

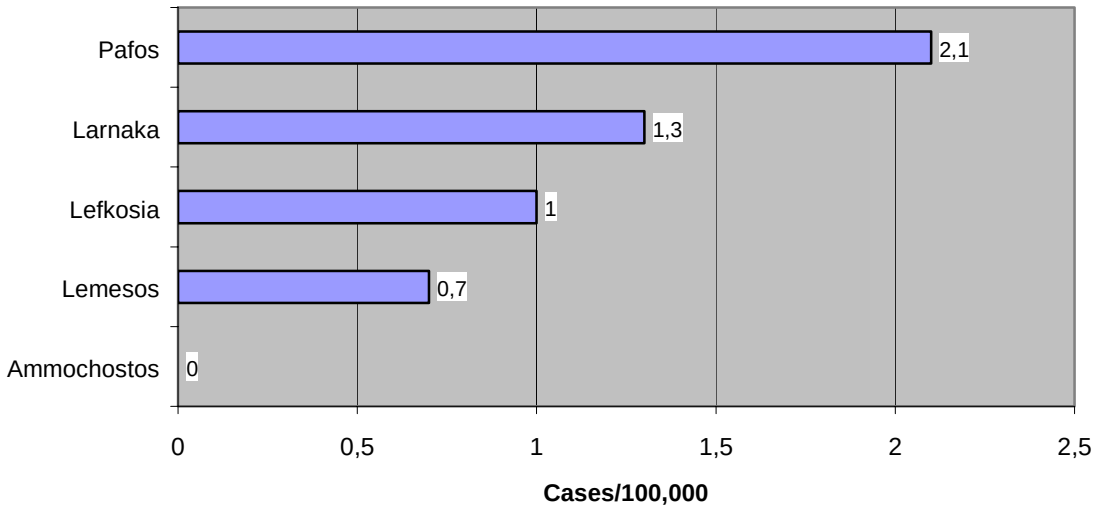


When adjusted by age, skin melanoma in males was more common in Ammochostos district followed by Lemesos, Larnaka, Pafos and Lefkosia (figure 47), while in females was more common in Pafos followed by Larnaka, Lefkosia, Lemesos and Ammochostos (figure 48).

Table 91: Melanoma of Skin by District, Female 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	1	1	0	0	2
30-34	1	0	0	0	0	1
35-39	1	1	1	1	0	4
40-44	2	0	1	0	0	3
45-49	2	0	0	0	0	2
50-54	1	1	1	0	0	3
55-59	2	0	1	1	0	4
60-64	1	2	1	0	0	4
65-69	1	0	1	1	0	3
70-74	3	0	0	2	0	5
75+	5	3	0	1	0	9
Unknown	0	0	0	0	0	0
TOTAL	**19**	**8**	**7**	**6**	**0**	**40**

FIGURE 48: Age-adjusted Incidence Rates (World Standard Population), Melanoma of Skin in Females, 1998-2000



It was surprising to find no melanoma cases in females in Ammochostos district. This information will be further investigated and the clinical practice i.e. methods of diagnosis with or without histological examination which is followed in all dermatological clinics will be investigated.

Morphology

A total of 100% of tumors diagnosed in males and 95,3% for tumors diagnosed in females have histological verification. The majority of tumors (80%) were classified as malignant melanoma.

Microscopic Verification

The proportion of microscopically verified cases was high, reaching about 97% of all cases registered.

Table 92: Melanoma of Skin: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	2	7	0
1 Localized only	23(88,5%)	16(76,1%)	23(85,2%)
2 Regional by direct extension only	0(0,0%)	1(4,8%)	2(7,4%)
3 Regional lymph nodes involved only	2(7,7%)	1(4,8%)	1(3,7%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	1(4,8%)	1(3,7%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	1(3,8%)	2(9,5%)	0(0,0%)
9 Unknown	0(0,0%)	0(0,0%)	0(0,0%)
TOTAL INVASIVE	**26(100%)**	**21(100%)**	**27(100%)**

Most of the cases of melanoma of skin (about 80%) are diagnosed when localised. (Table 92)

Cancer of the Cervix Uteri

- On average, 19 cases of invasive cervical cancers were registered per year.
- Half of the cases occurred under the age of 54 years.
- 2,5% of female cancers.

These figures refer to invasive and micro-invasive cases of cervical cancer but not Cervical Intraepithelial Neoplasia (CIN) I, II, III. On average, 19 cases of invasive cervical cancers were registered each year. Cancer of the cervix uteri accounted for almost 2,5% of all cancer cases in females. It was the 10th most commonly diagnosed cancer in females.

Table 93: Summary Statistics

YEAR INCIDENCE	1998	1999	2000
Incident Cases	21	23	14
Crude Rate (per 100,000)	6,1	6,6	3,9
WASR (per 100,000)	4,5	5,1	2,8
% of Female Cancers	2,7	3,1	1,8
% Microscopically Verified	95,2	100,0	100,0

Cumulative Risk 1998-2000 (0-74) (%) Female 0,17

WASR = Rates standardised for age to the world standard population

Age Profile

Half of the cases of cervical cancer were less than 54 years of age. (Figure 49)

FIGURE 49: Age Distribution of Cervix Uteri Cancer Cases, 1998-2000

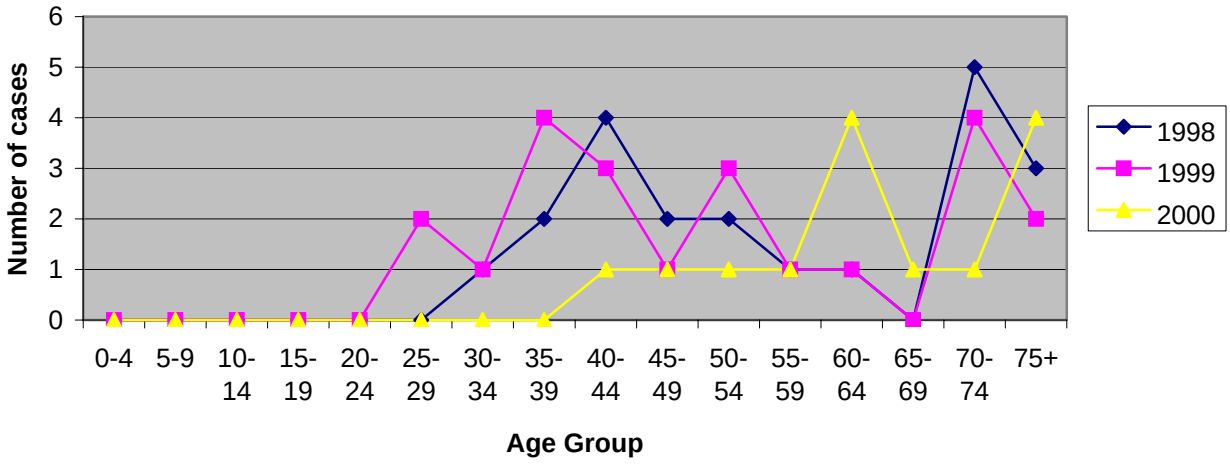


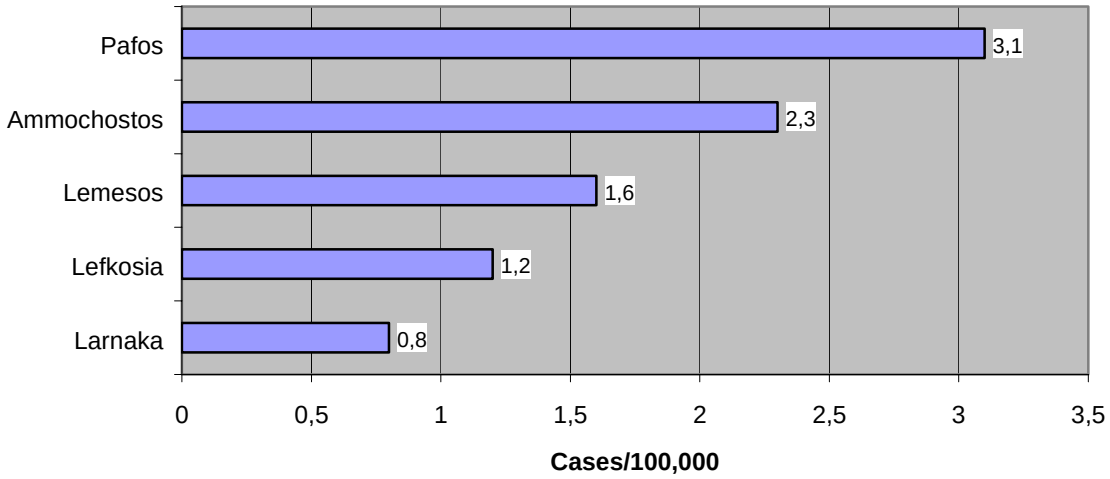
Table 94: Age Specific Incidence Rate of Cervix Uteri Cancer per 100,000 population (ASIR), 1998-2000

Age Group	1998		1999		2000	
	No.	ASIR	No.	ASIR	No.	ASIR
0-4	0	0,0	0	0,0	0	0,0
5-9	0	0,0	0	0,0	0	0,0
10-14	0	0,0	0	0,0	0	0,0
15-19	0	0,0	0	0,0	0	0,0
20-24	0	0,0	0	0,0	0	0,0
25-29	0	0,0	2	7,9	0	0,0
30-34	1	3,9	1	3,9	0	0,0
35-39	2	7,4	4	14,9	0	0,0
40-44	4	16,7	3	12,1	1	3,9
45-49	2	9,0	1	4,4	1	4,4
50-54	2	10,1	3	14,8	1	4,8
55-59	1	6,0	1	5,7	1	5,4
60-64	1	6,9	1	6,9	4	26,8
65-69	0	0,0	0	0,0	1	7,5
70-74	5	45,1	4	35,4	1	8,7
75+	3	16,5	2	10,8	4	21,0
Unknown	0		1		0	

Table 95: Cervix Uteri Cancer Cases by District, 1998-2000

Age Group	Lefkosia	Lemesos	Larnaka	Pafos	Ammochostos	Total
0-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	2	0	0	0	2
30-34	1	0	1	0	0	2
35-39	5	1	0	0	0	6
40-44	3	1	1	0	3	8
45-49	1	2	0	1	0	4
50-54	1	2	0	2	0	5
55-59	1	1	1	0	0	3
60-64	2	3	0	1	0	6
65-69	0	0	0	0	1	1
70-74	4	3	2	1	0	10
75+	3	3	0	2	0	8
Unknown	0	0	0	0	0	0
TOTAL	**21**	**18**	**5**	**7**	**4**	**55**

FIGURE 50: Age-adjusted Incidence Rates (World Standard Population), Cervix Uteri Cancer, 1998-2000



When adjusted by age, cervix uteri cancer was more common in Pafos district, followed by Ammochostos, Lemesos, Lefkosia and Larnaka (figure 50).

Morphology

About 81% of invasive cancers were squamous cell carcinoma. (Table 96)

Microscopic Verification

There was increasing proportion of microscopically verified cases rising to 98,3%.

Cancer of the Cervix

Table 96: Morphology of Invasive and In Situ Cancer of the Cervix

MORPHOLOGY DESCRIPTION	ICD-0-2	YEAR		
INVASIVE CANCERS	**Code**	**1998**	**1999**	**2000**
Squamous cell carcinoma, NOS	8070	18(85,7%)	18(78,3%)	11(78,6%)
Adenocarcinoma, NOS	8140	2(9,5%)	5(21,7%)	3(21,4%)
Carcinoma, NOS	8010	1(4,8%)	0(0,0%)	0(00,0%)
TOTAL		**21**	**23**	**14**

Table 97: Cancer of Cervix Uteri: Staging by Year of Diagnosis

Stage	1998	1999	2000
0 In situ	30	18	22
1 Localized only	18(85,7%)	15(65,3%)	8(57,2%)
2 Regional by direct extension only	1(4,8%)	5(21,8%)	0(0,0%)
3 Regional lymph nodes involved only	2(9,5%)	1(4,3%)	1(7,1%)
4 Regional by both direct extension & lymph nodes	0(0,0%)	1(4,3%)	1(7,1%)
5 Regional not otherwise specified	0(0,0%)	0(0,0%)	0(0,0%)
7 Distant site(s)/node(s) involved	0(0,0%)	1(4,3%)	0(0,0%)
9 Unknown	0(0,0%)	0(0,0%)	4(28,6%)
TOTAL INVASIVE	**21(100%)**	**23(100%)**	**14(100%)**

Over 70% of cervical cancer cases are diagnosed when localized, while 10% on average are involving regional lymph nodes. (Table 97)