



CANCER EPIDEMIOLOGY and EQUIPMENT STATUS in TURKEY

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DISTRIBUTION OF CANCER PATIENTS(2001)

CANCER SITES	MALE	%	FEMALE	%
Oral cavity&pharynx	2393	2.34	1451	1.80
Esophagus&stomach	9118	8.92	5945	7.38
Intestine&rectum	8893	8.69	6658	8.26
Larynx	4690	4.59	1136	1.41
Lung	27657	27.04	5764	7.15
Bone	1521	1.49	931	1.16
Skin	1853	1.81	1385	1.72
Breast	488	0.48	14464	17.95
Cervix uteri	-	-	4738	5.88
Uterus	-	-	6768	8.40
Prostate	6221	6.08	-	-
Leukemia	6338	6.20	4411	5.47
Lymphatic tissue	7588	7.42	5394	6.69
Unspecified sites	25511	24.94	21554	26.74
TOTAL	102271	100.00	80599	100.00

CHILDHOOD CANCERS ICCC SITES

ICCC SITE	HACETTEPE UNIV.		33 MAJOR CENTERS	
Leukemia	26	%11.7		*
Lymphomas&RES	30	%13.5	288	%26.8
CNS	65	%29.1	227	%21.2
Sympathetic NS	4	% 1.8	101	%9.4
Retinoblastoma	15	%6.7	49	% 4.6
Renal tumors	15	%6.7	76	%7.1
Hepatic tumors	10	%4.5	23	%2.1
Bone tumors	9	%4.0	106	%9.9
Soft tissue sa.	14	%6.3	81	%5.3
Germ-cell&gonadal	8	%3.6	65	%6.1
Carcinomas&others	27	%12.0	57	%5.3
TOTAL	223	%100	1073	%100

AROME

*leukemias are not included in this analysis

MOST FREQUENT CANCERS IN MALES FROM DIFFERENT SOURCES

CANCER SITES	ALL HOSPITAL	MOH	KIDEM
LUNG	27.0	24.4	38.6
STOMACH	7.5	8.0	5.2
LYMHATIC	7.4	-	-
LEUKEMIA	6.2	-	-
PROSTATE	6.1	6.1	-
LARYNX	4.6	4.9	6.9
COLORECTAL	8.69	-	4.5



MOST FREQUENT CANCERS IN FEMALES FROM DIFFERENT SOURCES

CANCER SITES	ALL HOSPITALS	MOH	KIDEM
BREAST	18.0	25.7	26.7
UTERUS	8.4	-	6.5
LUNG	7.2	4.2	-
STOMACH	6.0	5.4	-
CERVIX UTERI	5.9	-	5.9
OVARY	-	5.2	6.4
COLORECTAL	8.26	4.5	5.9

RELATIVE DISTRIBUTION of CANCERS BASED ON MH DIV. CANCER CONTROL 2000

CANCER SITES	MALES	FEMALES
RESPIRATORY SYSTEM	%32.8	%5.8
G.I.S.&PERITONIUM	%19.7	%19.3
UROGENITAL SYSTEM	%15.5	%17.0
BREAST	% 0.6	%25.0
SKIN	% 5.2	% 5.9
LYMPHATIC SYSTEM	% 3.3	% 2.2
ORAL CAVITY&PHARYNX	%3.3	% 2.3
BONE&CONNECTIVE TIS.	% 1.9	% 2.2
OTHERS&UNKNOWN	%17.67	%20.3



FIVE MOST FREQUENT CANCER SITES IN TURKEY

- BRONCHUS&LUNG
- BREAST
- GASTROINTESTINAL SYSTEM
- GENITOURINARY SYSTEM
- LYMPHATIC&HEMATOPOIETIC





PITFALLS OF CANCER EPIDEMIOLOGY IN TURKEY

STATISTICAL DATA ARE INSUFFICIENT TO ESTIMATE THE EXACT CANCER INCIDENCE IN TURKEY

HOSPITALISATION OF SAME PATIENTS TO SEVERAL HOSPITALS IS POSSIBLE

INCREASINGLY APPRECIABLE NUMBER OF PATIENTS TREATED IN PRIVATE and MILITARY HOSPITALS THUS NEVER ADMITTED TO A GENERAL HOSPITALS

ALTHOUGH CANCER HAS BEEN DESIGNATED AS ONE OF THE "REPORTABLE DISEASE" to THE MOH ;THE COMPLIANCE TO THIS RULE HAS NOT BEEN VERY GOOD IN GENERAL





DISTRIBUTION OF THE CENTERS ACCORDING TO THEIR STATUS

GOVERNMENT
BASE HOSPITALS 37

CANCER CENTERS 3

PRIVATE
HOSPITALS 23

TOTAL 63



COMPARASION BETWEEN EXISTING and NEEDED HUMAN RESOURCES and APPARATUS in TURKEY

	EXIST	NEEDED
ACCELERATOR	53	175
COBALT	55	175
SIMULATOR	61	150
BRACHYTHERAPY	23	120
TPS	45	175
SPECIALIST	331	420
RESIDENT	102	100
PHYSICIST	110	530
TECHNICIAN	265	1745

NUMBERS OF MEGAVOLTAGE APP. and SPECIALISTS for ONE MILLION POP. ACCORDING to the REGIONS

REGION	MV APP/1 MILL.	RAD.ONC./1 MILL
MARMARA	1.7	8.3
MID ANATOLIA	2.6	12.9
EGEAN	1.33	4.8
MEDITERRANEAN	0.77	2
BLACK SEA	0.32	1.36
EAST&SOUTH EAST	0.61	0.77
TURKEY	1.2	4.9
NEEDED	5	6

TEN TOP ANTICANCER DRUGS

- CISPLATIN; CARBOPLATIN
- ANTIMETABOLITES (5-FU, GEMCITABINE)
- ANTRACYCLINES (ADRIA, EPI)
- CYCLOPHOSPHAMIDE; IFOSPHAMIDE
- TAXANES (DOCETAXEL, PACLITAXEL)
- OXALIPLATINE
- IRINOTECAN
- VINCA ALCALOIDES
- BLEOMYCINE
- BIOLOGICAL AGENTS (IMATINIB, CETUXIMAB, BEVACIZUMAB, THALIDOMIDE etc.)





SUMMARY

- THE POPULATION OF TURKEY IS ABOUT 70 MILLION
- INCIDENCE OF CANCER IS 300 per 100000
- EXPECTING NEW CANCER PATIENTS IS 210000 per yr
- RADIOTHERAPY REQUIREMENT OF PATIENTS IS ABOUT 105000 per yr.
- WE NEED AN EQUIPMENT FOR THOSE PATIENTS








AROME

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