



Oncology : situation in Tunisia

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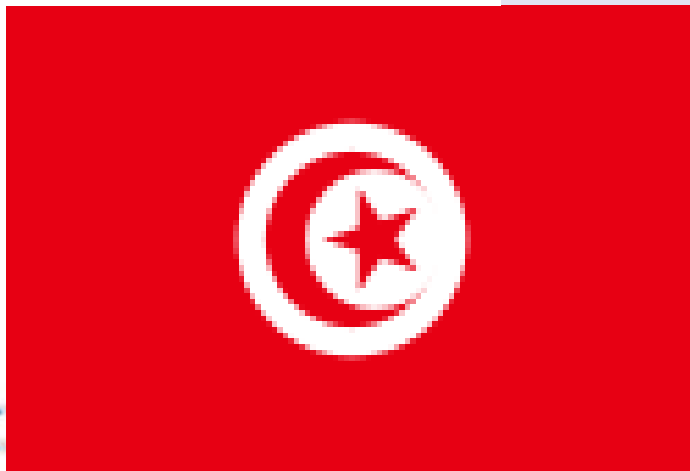
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We came from here !!



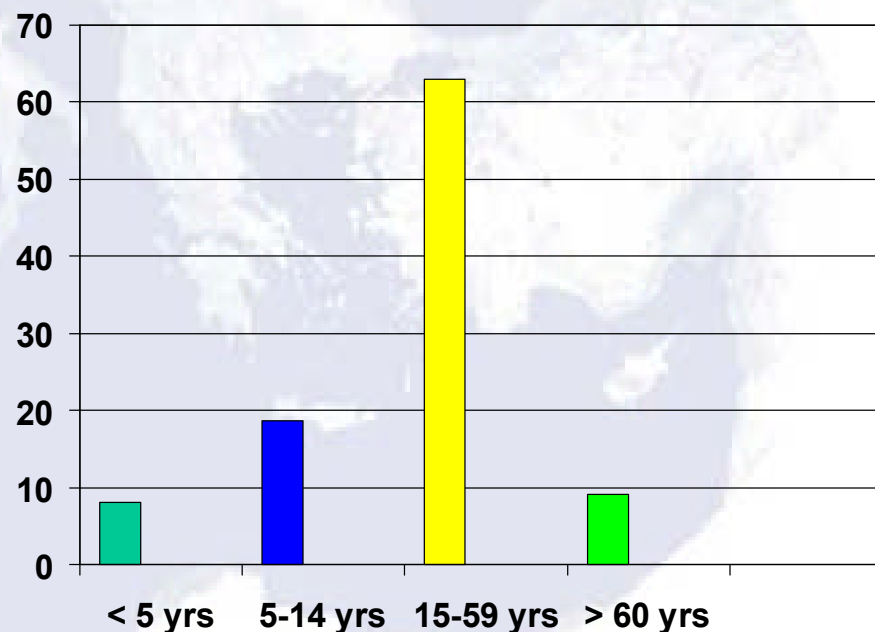
Introduction

- **Languages : Arabic, French**
- **Population (2005) : 10 026 000 inhabitants**
- **Density : 61 inhab./ Km²**
- **Fecondity index : 2 childrens / woman**
- **Life expectancy : 73 years**
- **Urban Population : 64 %**
- **Main towns :**
 - **Tunis** : 728 453 inhabitants (2 083 000 integrating the big Tunis)
 - **Sfax** : 265 131 inhabitants (500 000 integrating the big Sfax)
 - **Sousse** : 173 047 inhabitants (400 000 integrating the big Sousse)
 - **Kairouan** : 117 903 inhabitants
 - **Gabès** : 116 323 inhabitants (170 000 integrating the big Gabès)
 - **Bizerte** : 114 371 inhabitants (150 000 integrating the big Bizerte)



Introduction

- **Population Structure by age (in 2004)**
 - 8,1 % < 5 years
 - 18,6% betw 5 and 14 yrs
 - 64,0% betw 15 and 59 yrs
 - 9, 1 % > 60 years
- **Money :**
1Dinar Tunisien(TND) = 1 000 Millimes .
Exchange rate (April 2007) :
1 Euro = 1,7 Dinar (TND)
- **Internal crude product/inhabitant : 21.2 billions of dollars (2002)**



Introduction

- **Public Health Infrastructure (Main provider of health services) based on 3 levels complementary :**
 - **First level = 2028 centers of first line health and 106 circonscription hospitals**
 - **Second level covered by 32 regional hospitals.**
 - **Third level represented by 29 university hospital.**



Introduction

- **Private practice Infrastructure : represented by an ambulatory network of general or specialised medicine offering medical plus juxtamedical service and hospitalisation structures :**
 - **70 PP clinics mono or multidisciplinary**
 - **3293 offices of private practice including 50.9% of specialists.**
 - **1392 pharmacies.**
 - **159 laboratories for medical analysis**
 - **56 services of health transportation.**
 - **567 offices of juxtamedicals private practice.**



FICHE AROME MEDITERANEAN WEB

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Present situation

Is there any cancer registry ?

YES !

- **3 Registries**

- **North**
- **Center**
- **South**

Functioning since 1987



Is there any scientific society of oncology ?

- **No**
- **Many associations :**
 - **Association Tunisienne de lutte contre le cancer ATCC.**
 - **Association de prévention et de lutte contre le cancer du centre Tunisien APCCT.**
 - **Association pour la recherche sur le cancer de la Faculté de Médecine de Monastir.**
 - **Association d'enregistrement et de lutte contre le cancer du sud Tunisien.**
- **Collège National de Cancérologie.**

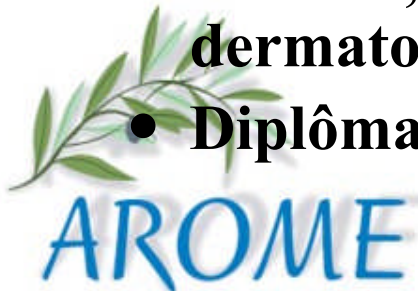


Is there any university diploma of surgical oncology ?

Is there any university diploma of radiotherapy ?

Is there any university diploma in medical oncology ?

- **Collège National de cancérologie (Chirurgie Carcinologique, Radiothérapie Carcinologique et Carcinologie Médicale)**
- **Résidanat**
- **Cursus , Guides et carnets de stage**
- **EPU and séminaries**
- **Certificats d'Etudes Complémentaires (CEC) (traitement de la douleur, maladies du sein, oncologie thoracique, oncologie dermatologique...)**
- **Diplôme of speciality**





Is there any specialised society of pharmacists in oncology therapies ?

- **NO society of specialised pharmacists**

Is there any society of specialised nurses in oncology ?

- **NO society of specialised nurses**



Is there any anticancer center(s) ?

- **YES 1 Anticancer Center = Institut Salah Azaiz**
- **2 integrated units of medical oncology and radiotherapy in university hospitals in Sousse and Sfax.**
- **1 private center of oncology (Sousse)**
- **Others units (PP) of treatment (radiotherapy ++)**





Is there any association of cancer patients ?

- **YES, the Association Tunisienne d'Aide aux Malades de Cancer du Sein ATAMCS**
- **Association for assistance to the patients with breast cancer**
- **Created in 2006**
- **Board including 6 cured patients and 4 oncologists**



Is there any National Cancer Plan ?

- **YES**
- **Plan national de lutte contre le cancer 2006-2010**
 - **In collaboration with the Institut National Français du Cancer (INCa)**
 - **Piloting comittee and sub-commissions :**
 - **Formation/Research**
 - **Epidémiology**
 - **Primary Prevention**
 - **Screening/Early Diagnosis**
 - **Management**



Is there any research groups in oncology ?

YES in the specialised structures of treatment :

- Lymphomas
- Myeloma
- Hodgkin disease
- Nasopharyngeal cancer
- Breast cancer

Is there any group of basic research ?

- Few Units of basic research
- Laboratory of molecular immunooncology
(breast cancer, nasopharyngeal, cervix)



Is there any national referential(s) for cancer(s) ?

- **Done : Hodgkin disease** Maladie de Hodgkin, Lymphomes non Hodgkiniens
- **Referentials in elaboration in the field of Cancer Plan**

Breast

Lung

Colo-rectal

Nasopharynx

Ovary

Prostate

Cervix

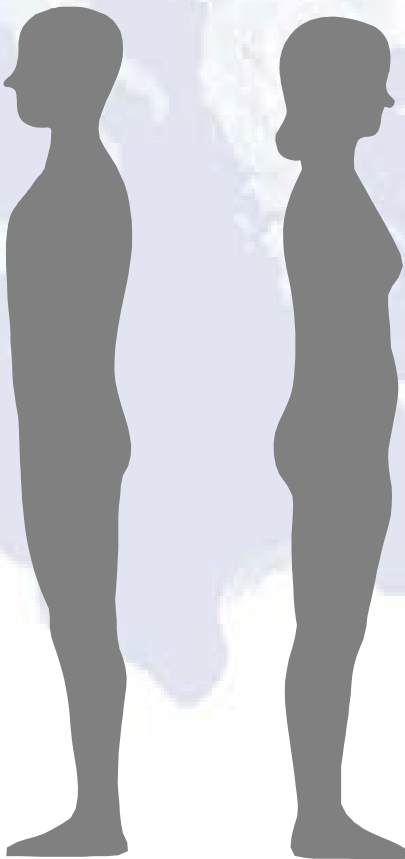
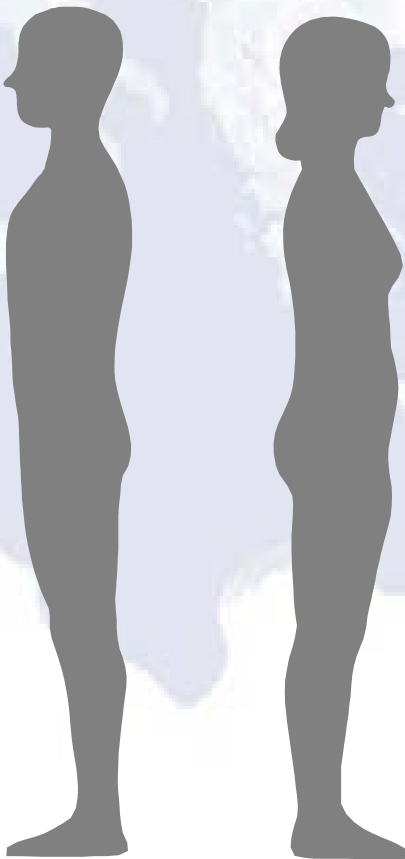


EPIDEMIOLOGY (Type de cancer)

- **Last publications of the 3 registries for 1993-2001 (Center), 1995-1998 (North) and 1997-1999 for South.**
- **Data published in “Cancer in Africa” of CIRC of Lyon in 2003»**
- **Center, 4.080 new cases collected in the state of Sousse between 1993 and 2001, with crude incidence of 115/100.000 inhabitants in man and 83/100.000 in woman.**
- **In man, sites most frequents lung → bladder → skin → prostate and colon-rectum.**
- **In woman, breast → colon-rectum → cervix → endometrium and skin.**
- **North, 4.042 cases collected between 1995 et 1998. Crude incidence of 103/100.000 inhabitants in man and 78/100.000 in habitants in woman.**
- **Registry of South (Sfax) → 2.533 new cases of cancer between 1997 and 1999, = crude incidence of 108/100.000 in man and 79/100.000 in woman.**



Estimation of cancer cases in Tunisia 1995-1998 according to the CR of the North*

		Man 2116	Woman 1628	
Lung	22,1%			•27,8% Breast
Bladder	10,3%			•7,3% Colon-rectum
Skin	6,2%			•6,1% Cervix
Prostate	6,6%			•6% Endometrium
Colon-rectum	6%			•5,6% Skin
Stomach	5,1%			•4,7% Gallbladder
Larynx	4,9%			•4,1% Ovary
Non-Hodgkin	4,5%			•4% Stomach
Nasopharynx	3,2%			•3,9% Non-Hodgkin
Pancreas	2%			•3,6% Thyroid
Other Sites	18%			•2% Pancreas

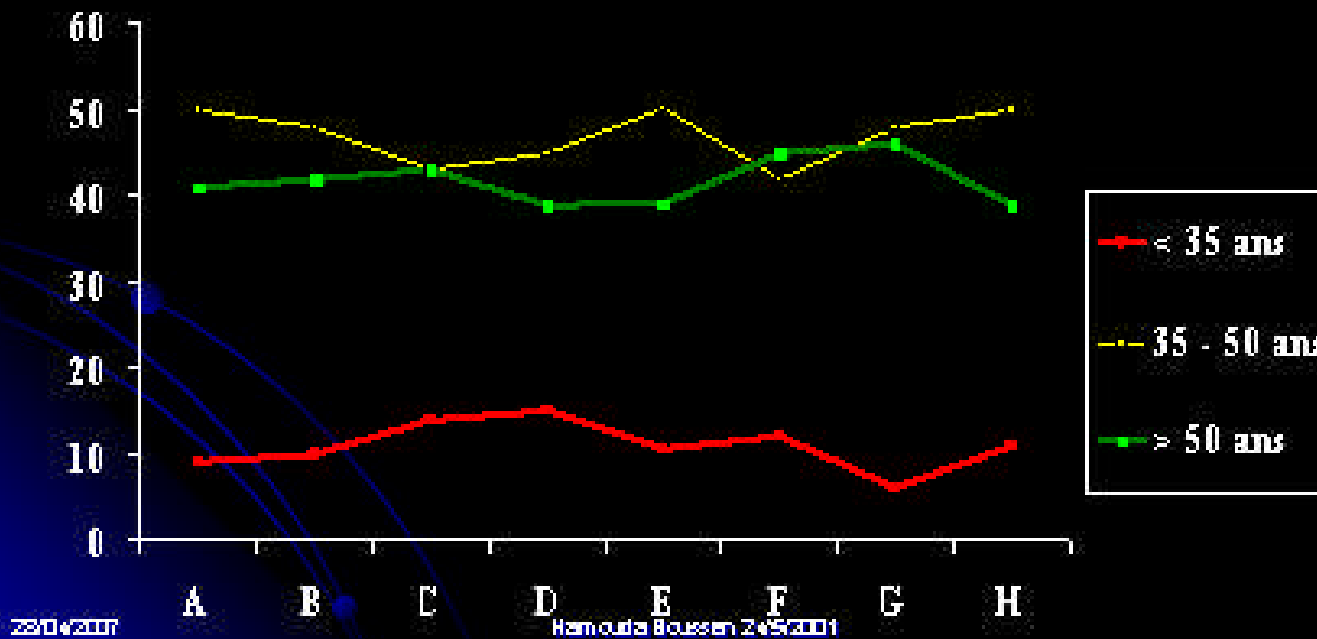
* Registre des cancers
du Nord de la Tunisie



Cancer du Sein



Répartition par tranche d'Age



2010/2011

Hanouta Boussen 2010/2011

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AROME

Association de Radiothérapie et d'Oncologie de la Méditerranée

Volume of patients

- **10000 new cases per year**
- **6000 to be treated by radiotherapy → Only 3500 treated**
- **3000 treated by chemotherapy**
- **1500 breast cancers. 11% agéd less than 40 years**
- **Inflammatory BC in 15% of cases (Néglécted ??)**
- **Expenses for specific medical therapies estimated to 36 Millions de TND (19 Millions of Euros)**
- **Social coverage > 50%**
- **Réform of the health insurance (CNAM) in process**
- **Nomenclature published since one year**
- **Application in july 2007**



What are the most important 10 anticancer drugs ?

- **Cisplatin**
- **Adria-epiadriamycin**
- **5fluorouracil**
- **Cyclophosphamide**
- **Ifosfamide**
- **Tamoxifene**
- **Methotrexate**
- **Taxanes**
- **Mabthera**
- **Gemcitabine**
- **Eloxatine**
- **Camptothécine**





Do you have a center of radiotherapy with a linear accelerator ?

- **YES at the institut Salah Azaiz**
- **Projects :**
 - in the UHosp of Sousse – Sfax
 - in private practice (1)



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Present infrastructure of radiotherapy

- **1 linear accelerator**
- . **5 Cobalts in the public centers**
- . **5 Cobalts in private practice including**
 - 1 moderne (Elite 100)
- . **4 Simulators (3 public , 1private)**
- . **3 machines of low energies**
- . **2 TPS**
- . **4 Curiethrons Cesium , 1 high dose curietherapy**



Is there any activity of Curietherapy ?

- **YES at the institut National du cancer Salah Azaiz**
- **YES in the 2 public centers, the private center and the private units of treatment**

Waht type of energy you use in Curietherapy ?

- **Curietherapie with low dose debit +++**
 - **Gynécology (Cesium, Iridium)**
 - **Skiin (Iridium)**
 - **Ophtalmology (Rhutenium, strontium)**
- **Curiethérapie at high dose debit**
 - **Prostate (Iridium)**





Number of oncologists (Public/Private)

	Med Onc	Radiother	Surg Oncol
Tunis	5/5	7/1	9/3
Sousse	5/1	3/1	0/0
Sfax	5/6	3/2	0/0
Total	27	17	12





Number of young oncologists in training

	Med Onc	Radiother	Surg Oncol
Tunis	11	4	4
Sousse	6	4	0
Sfax	5	2	0
Total	22	10	4





Thank you
Merci
Shukran
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Grazie
Muchas gracias
Efkaristo
Tachakkurederem

