

CANCER INCIDENCE

IN MAGHREB

North Africa

Pr M Hamdi Cherif

Setif Cancer Registry , Algeria

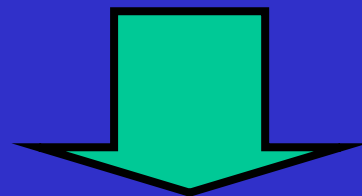
Napoli 28-30 april 07

In North Africa

Epidemiologic Transition

- Demographic transition*
- Transformations of the environment*
- Change of the ways of life*

Non transmissible chronic diseases



Health Priorities

Cancer = major problem of public health

WHO:

20 million case in the world

10 Million new cases

06 million death

57 % in the developing countries

AFRICA



**International Agency for Research on Cancer
World Health Organization**

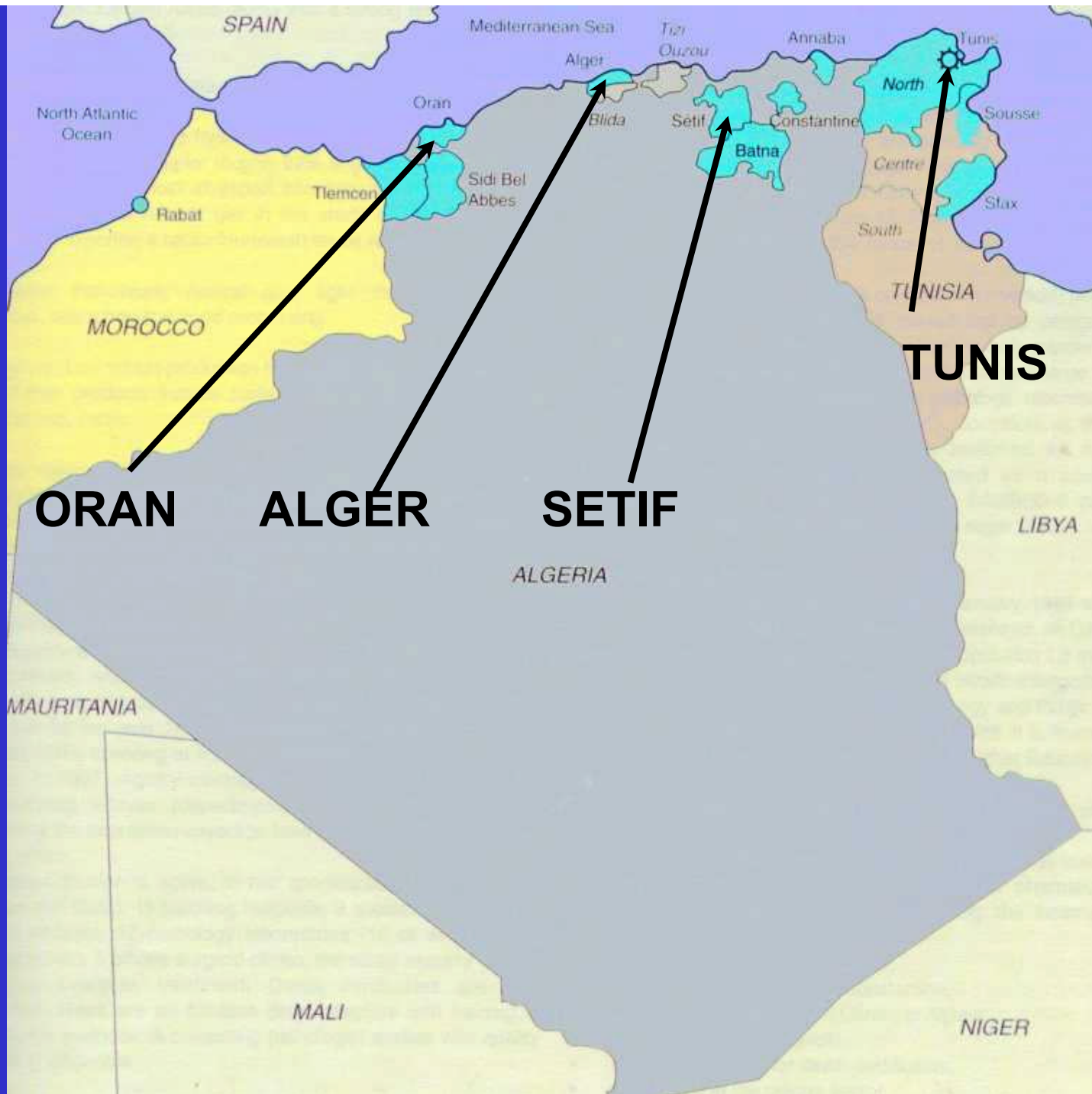
Cancer in Africa

Epidemiology and Prevention



**Edited by D.M. Parkin, J. Ferlay, M. Hamdi-Chérif, F. Sitas,
J.O. Thomas, H. Wabinga, S.L. Whelan**

**IARC Scientific Publications No. 153
IARC Press Lyon 2003**



ORAN

ALGER

SETIF

TUNIS

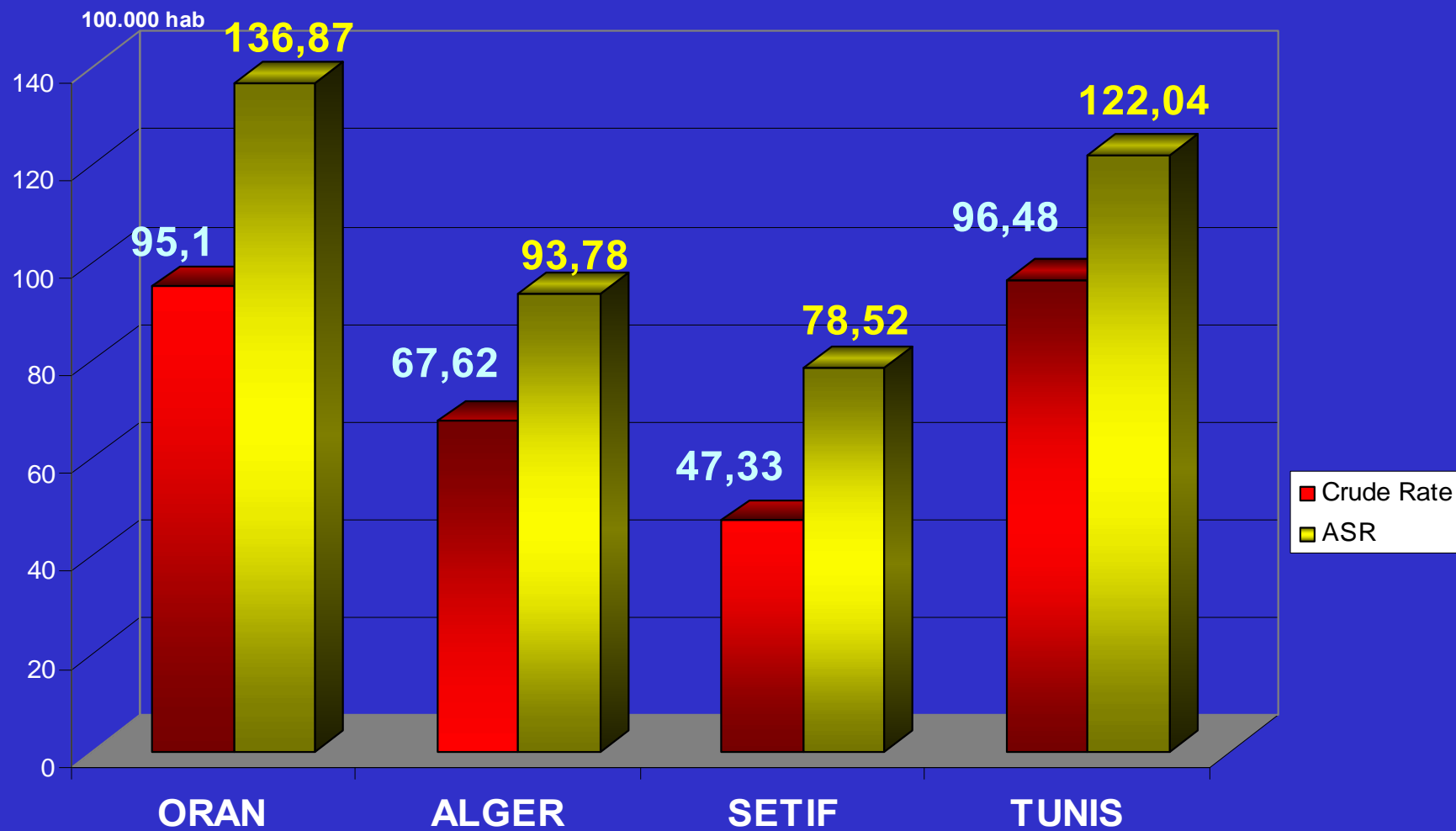
ALGERIA

LIBYA

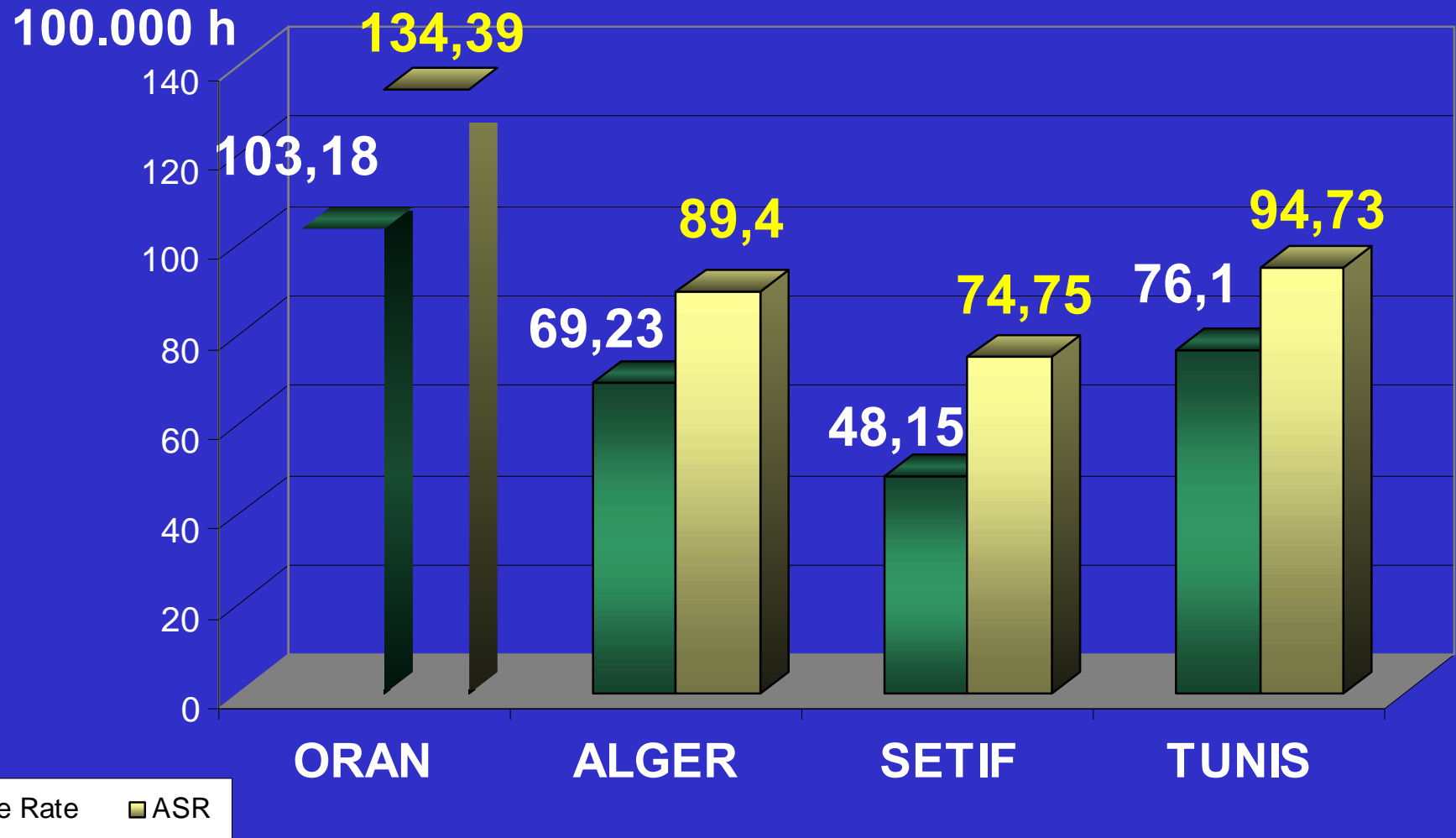
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MALI

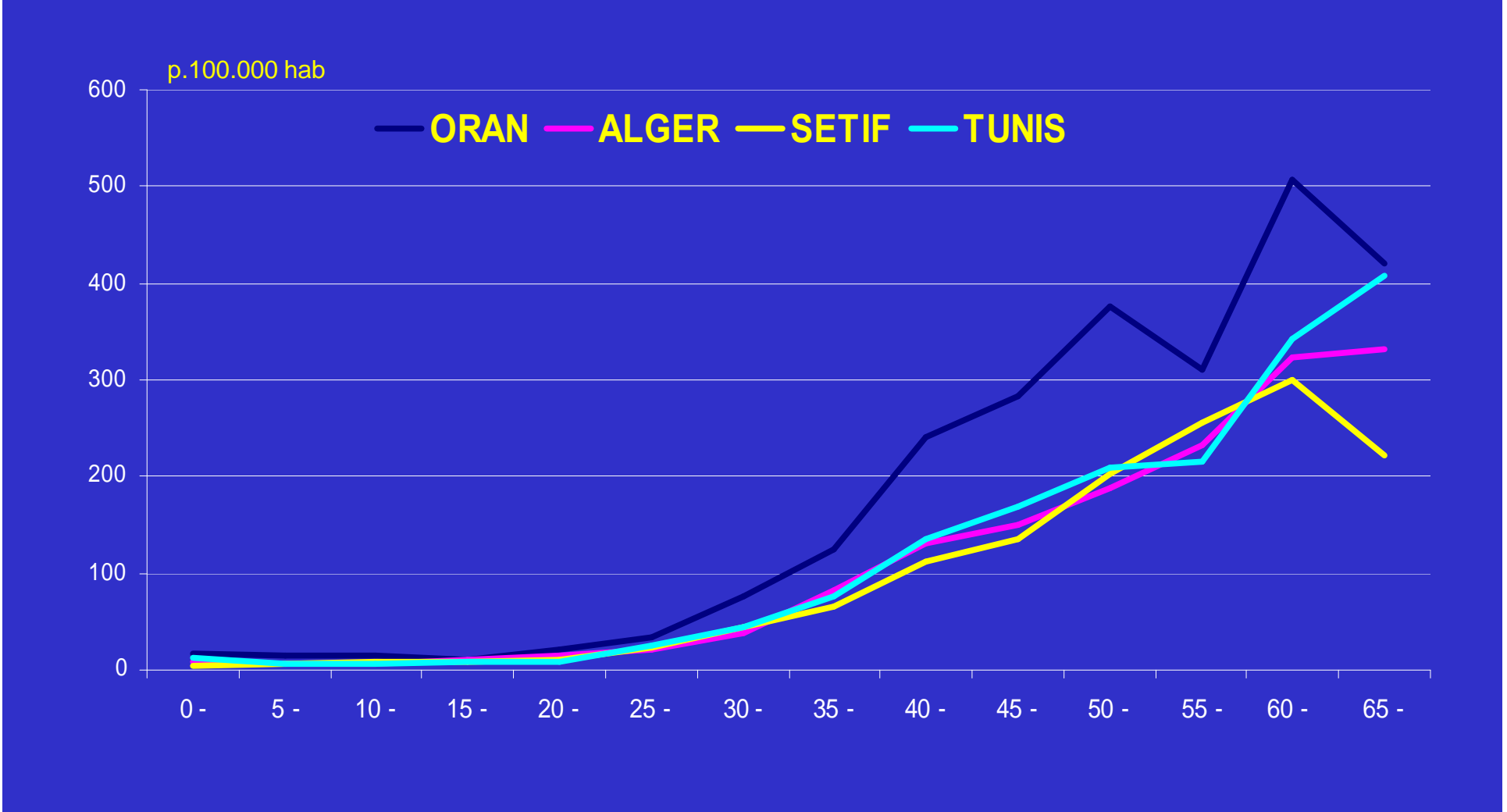
NIGER



CANCER INCIDENCE IN MACHREB ALL SITES - FEMALE

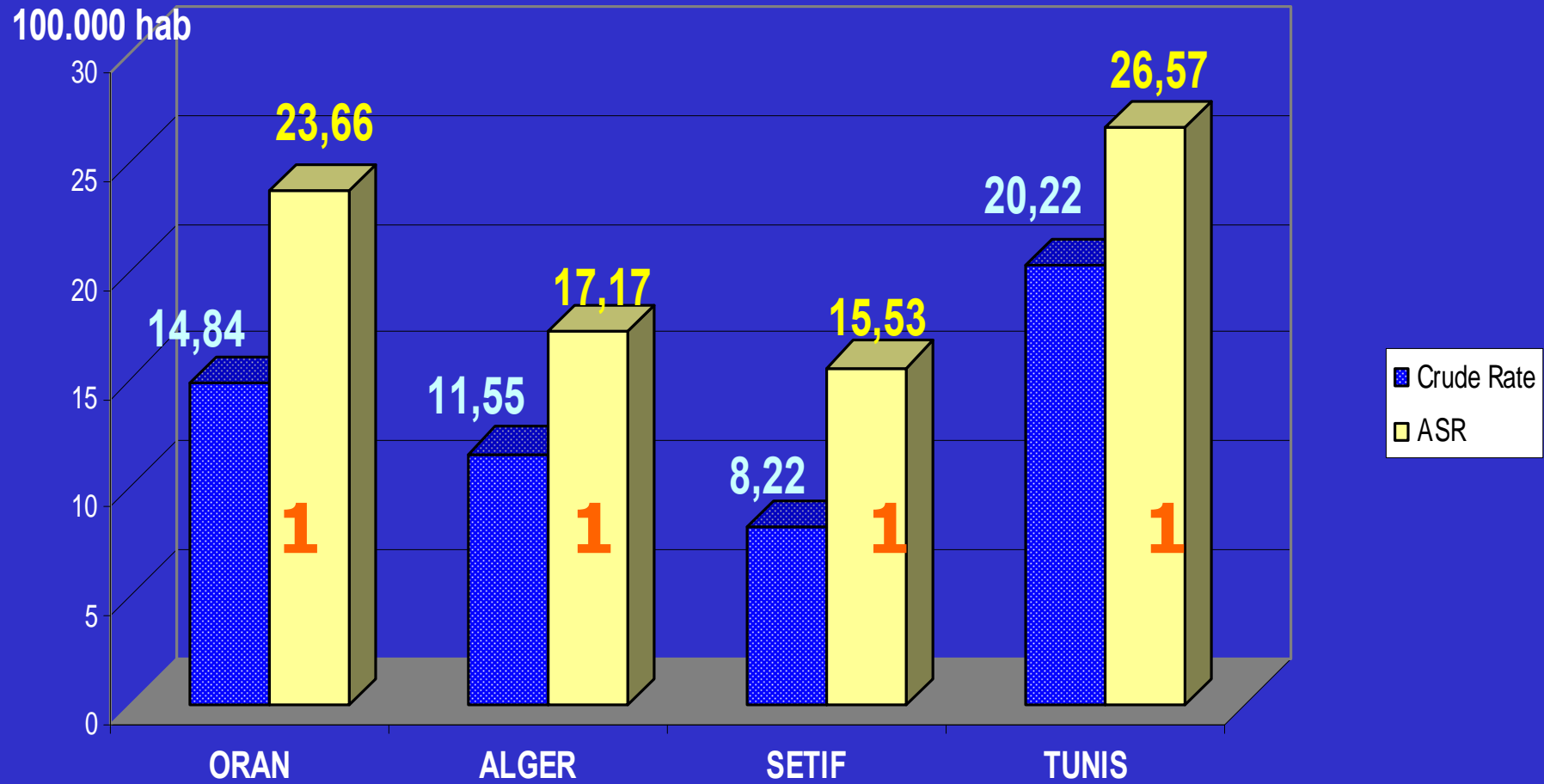
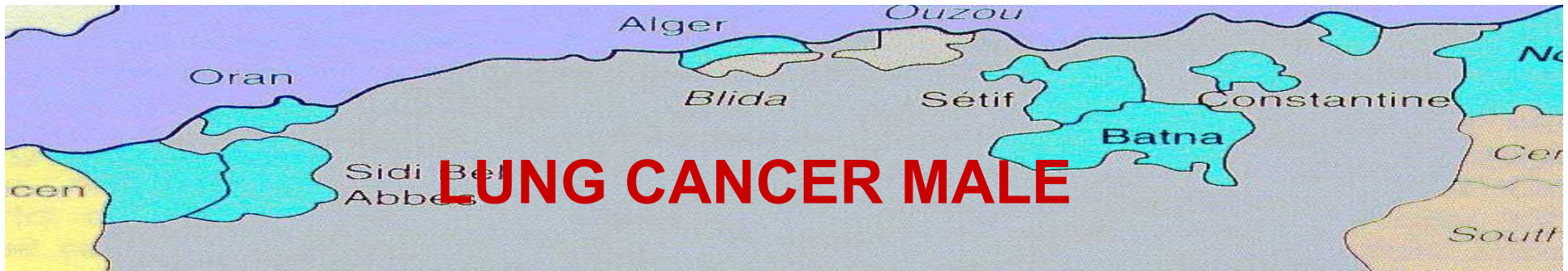


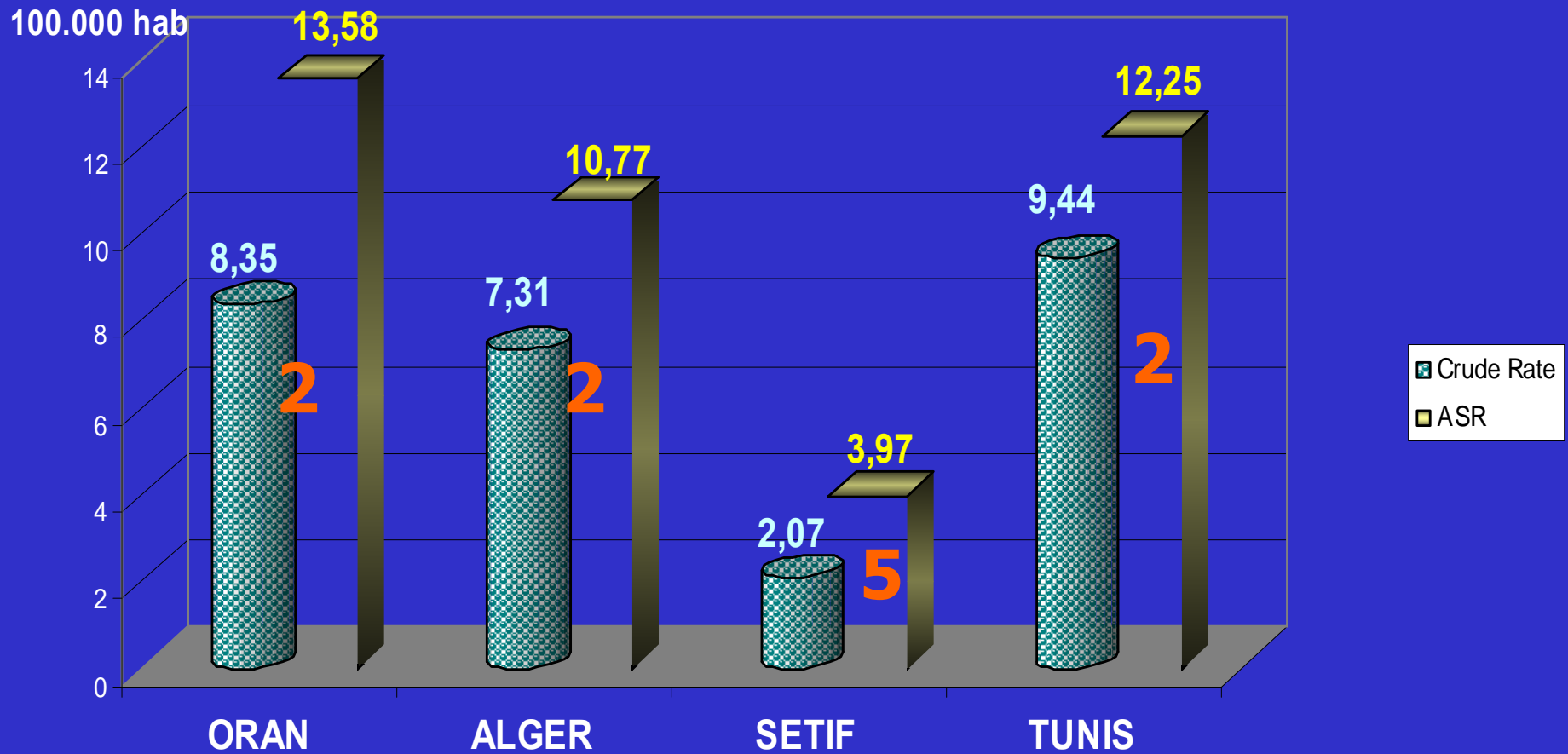
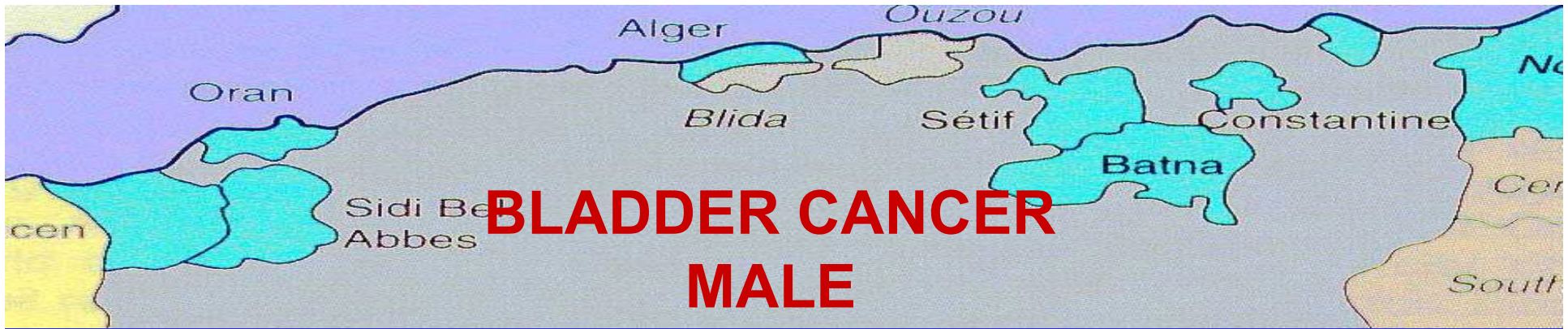


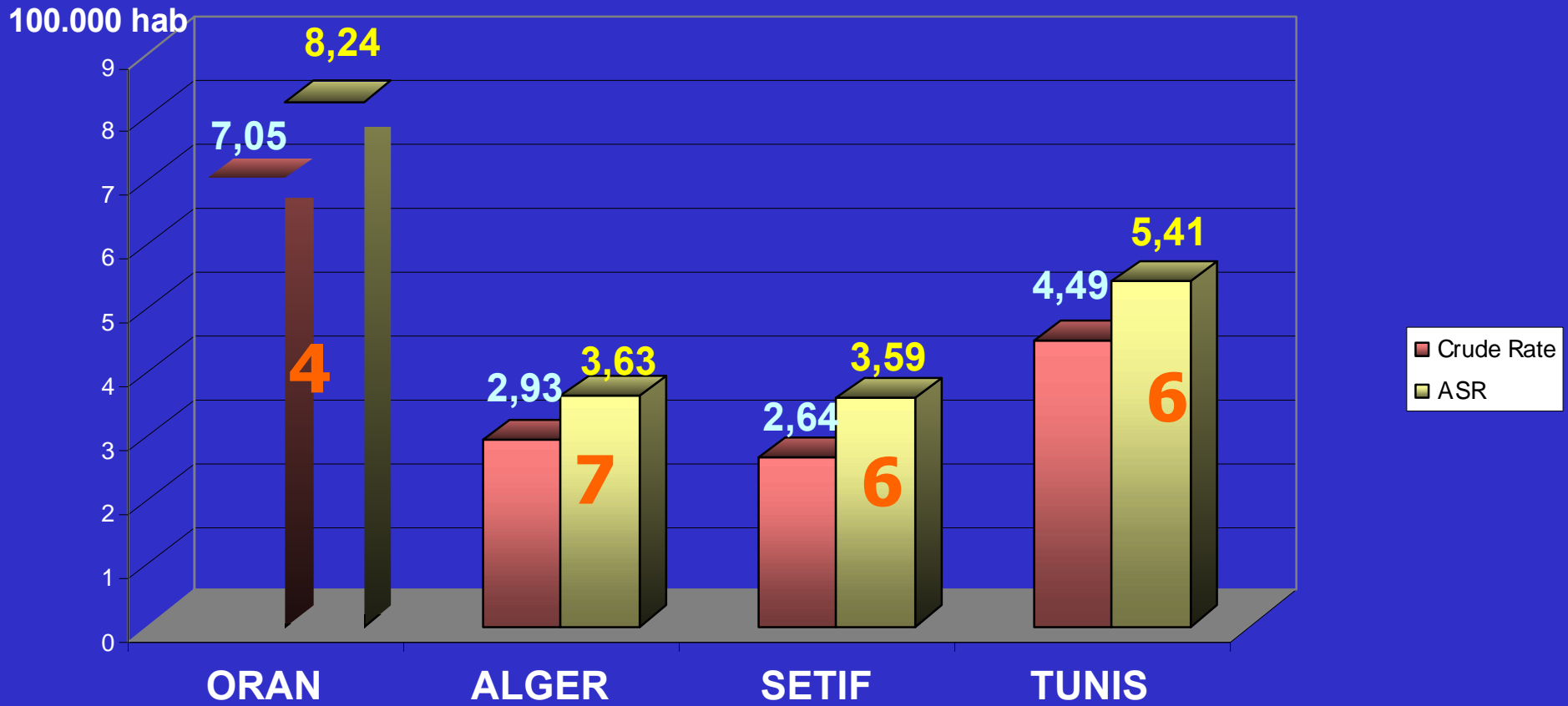


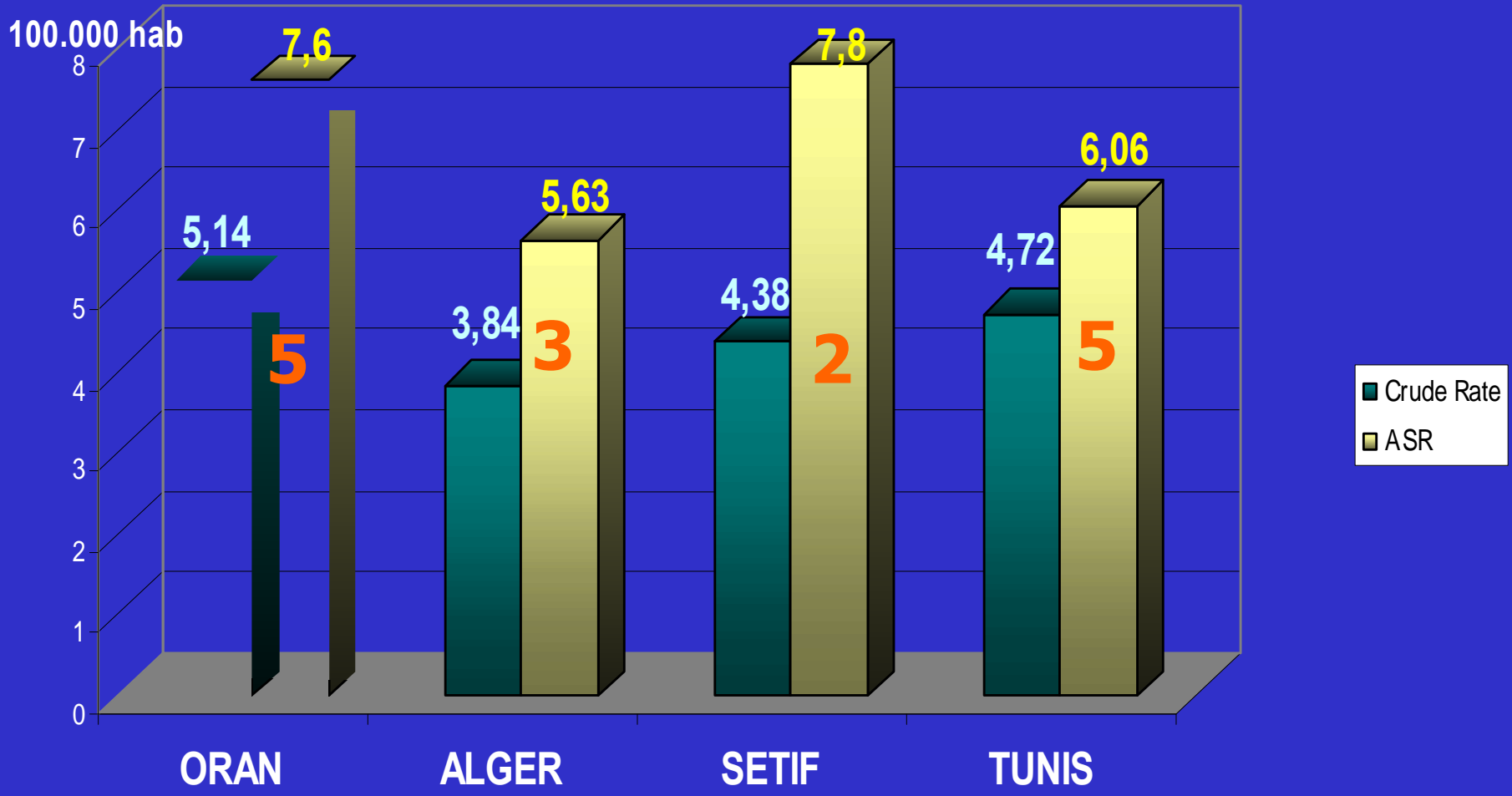
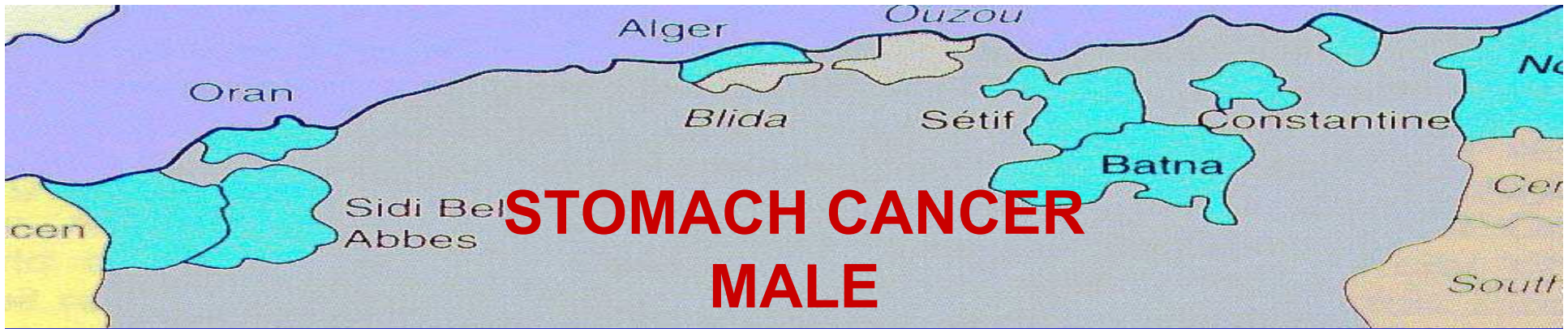
COMMONLY CANCERS IN MALE

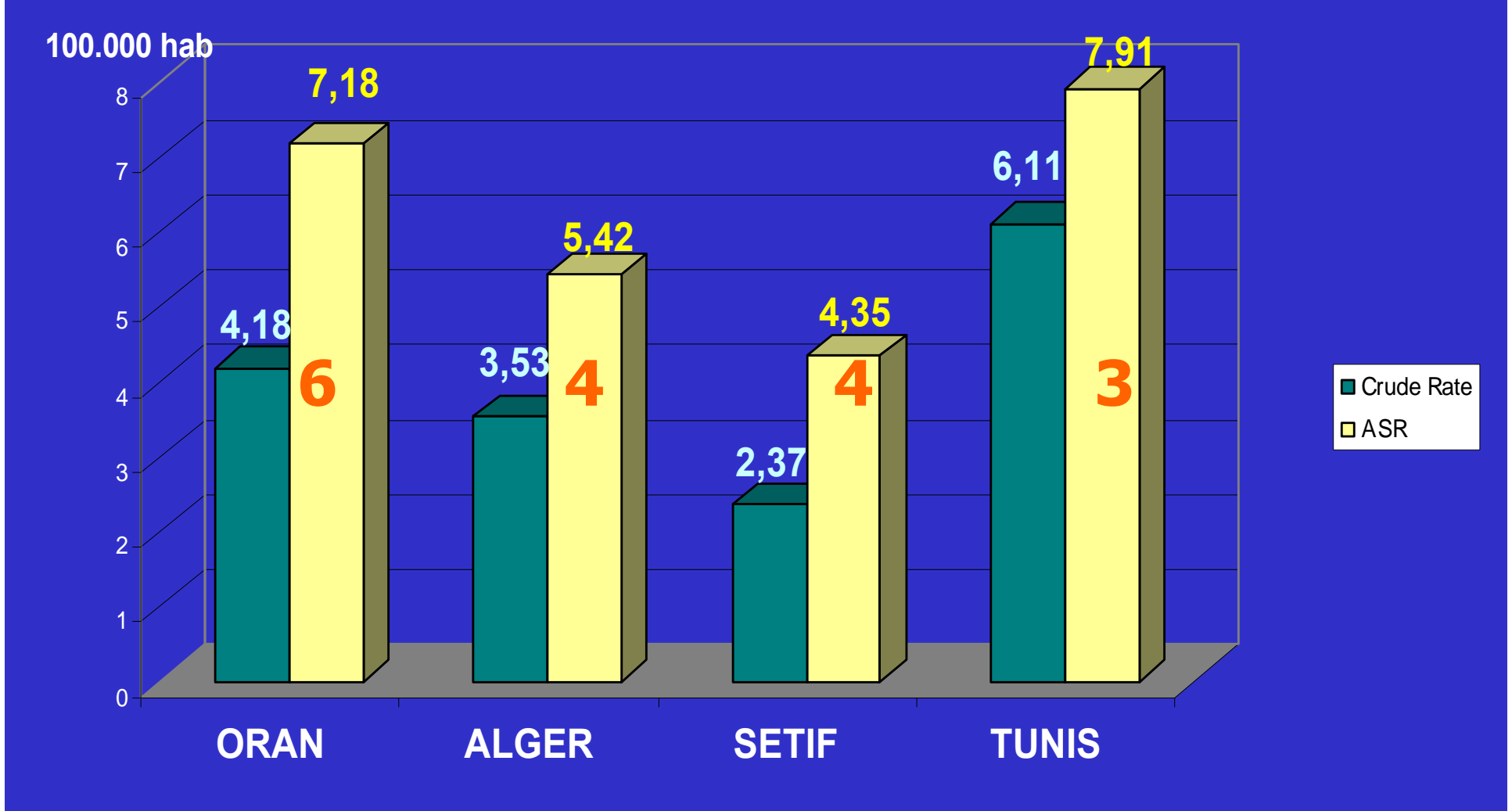
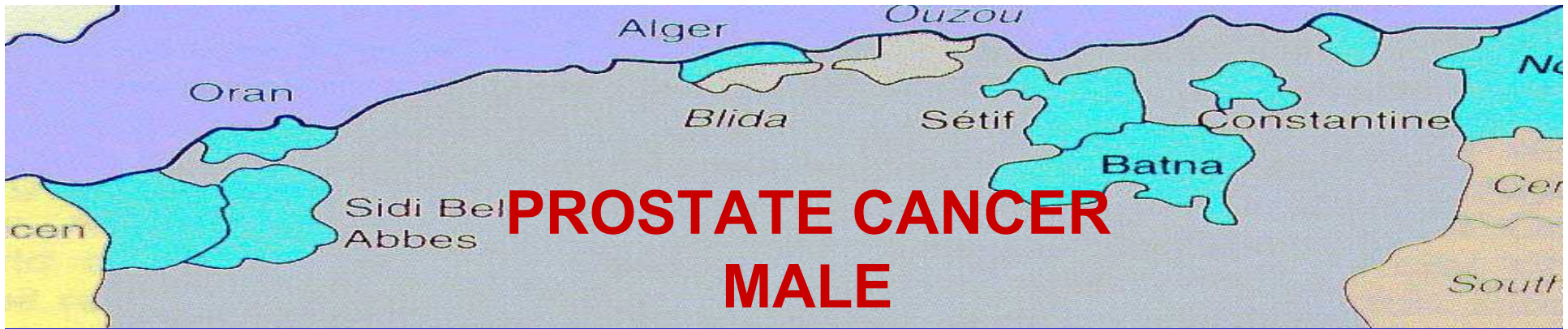
ORAN	ALGER	SETIF	TUNIS	GLOBOCAN
Lung	Lung	Lung	Lung	Lung
Bladder	Bladder	Bladder	Bladder	Bladder
Larynx	Stomach	Nasopharynge carcinoma	Prostate	Stomach
NHL	Prostate	Prostate	Larynx	Colon / Rectum
Stomach	Larynx	Vessie	Stomach	Prostate
Prostate	Rectum	NHL	NHL	Larynx
Nasopharynge carcinoma	NHL	Leukaemia	Leukaemia	NHL
Rectum	Colon	Mouth	Nasopharynge carcinoma	Nasopharynge carcinoma
Colon	Nasopharynge carcinoma	Colon	Colon	Leukaemia
Tissus mous	Brain	Larynx	Liver	Brain



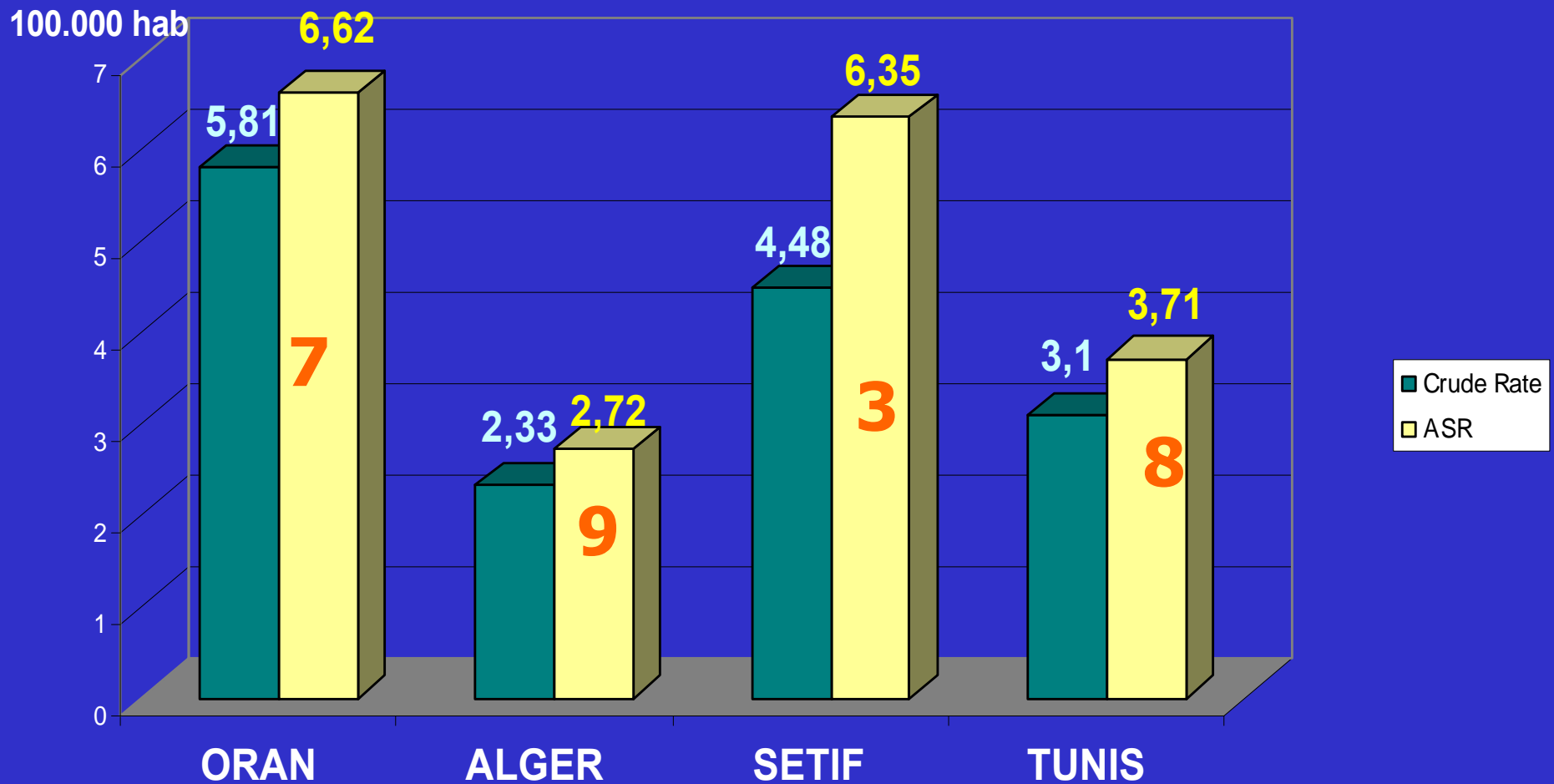


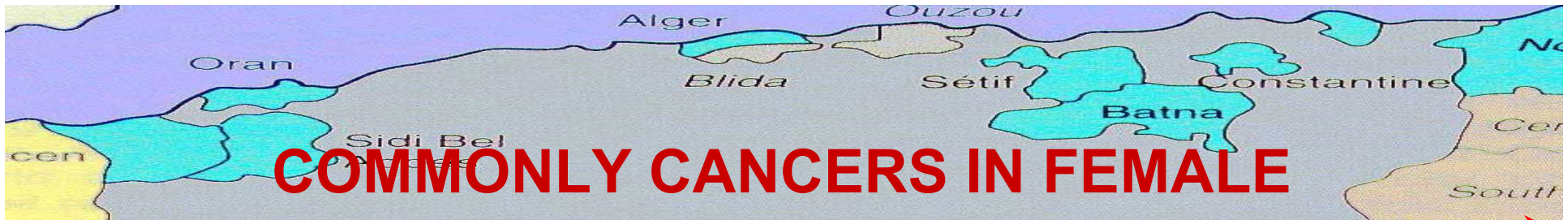






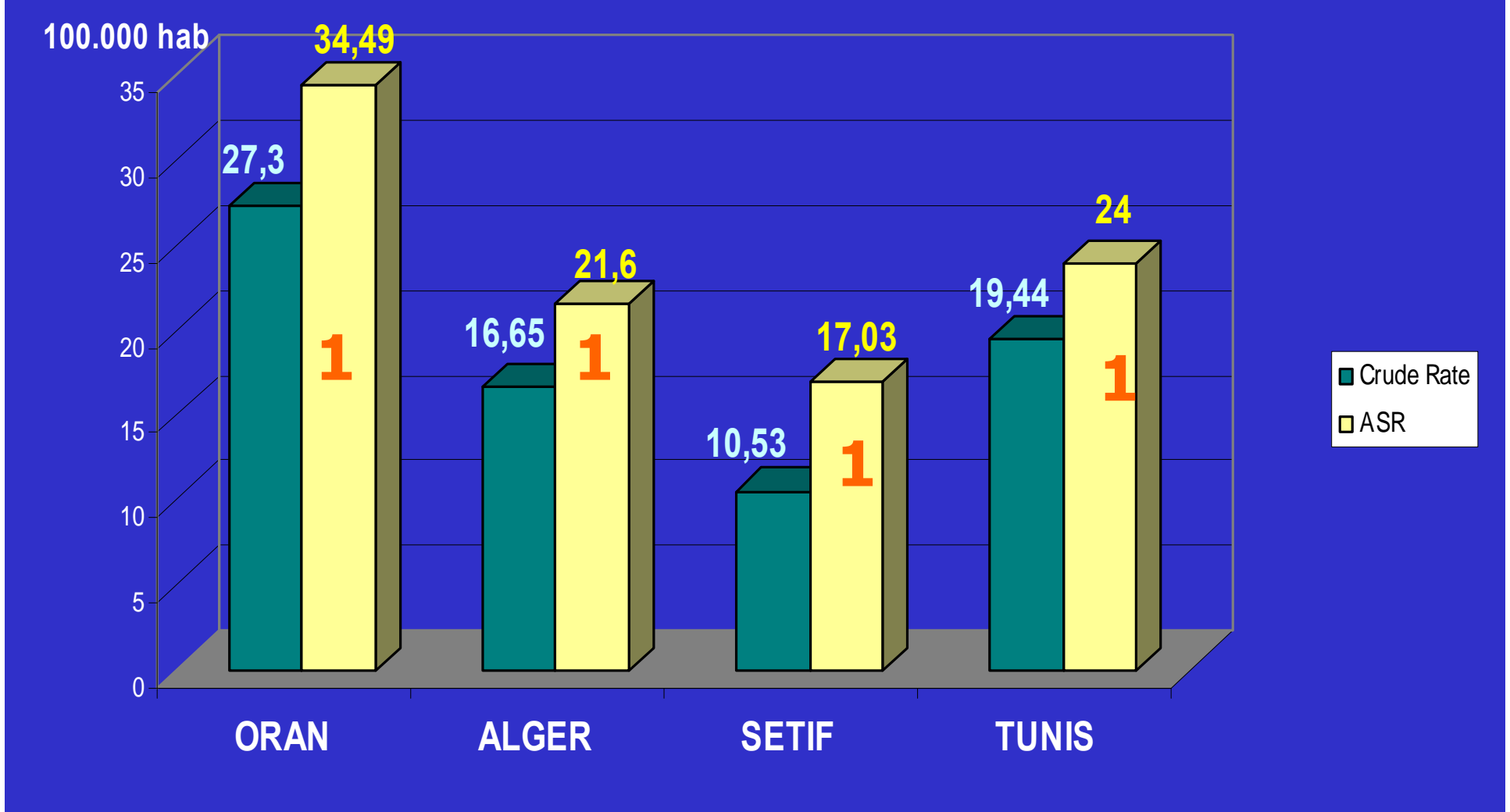
NASOPHARYNGEAL CARCINOMA MALE

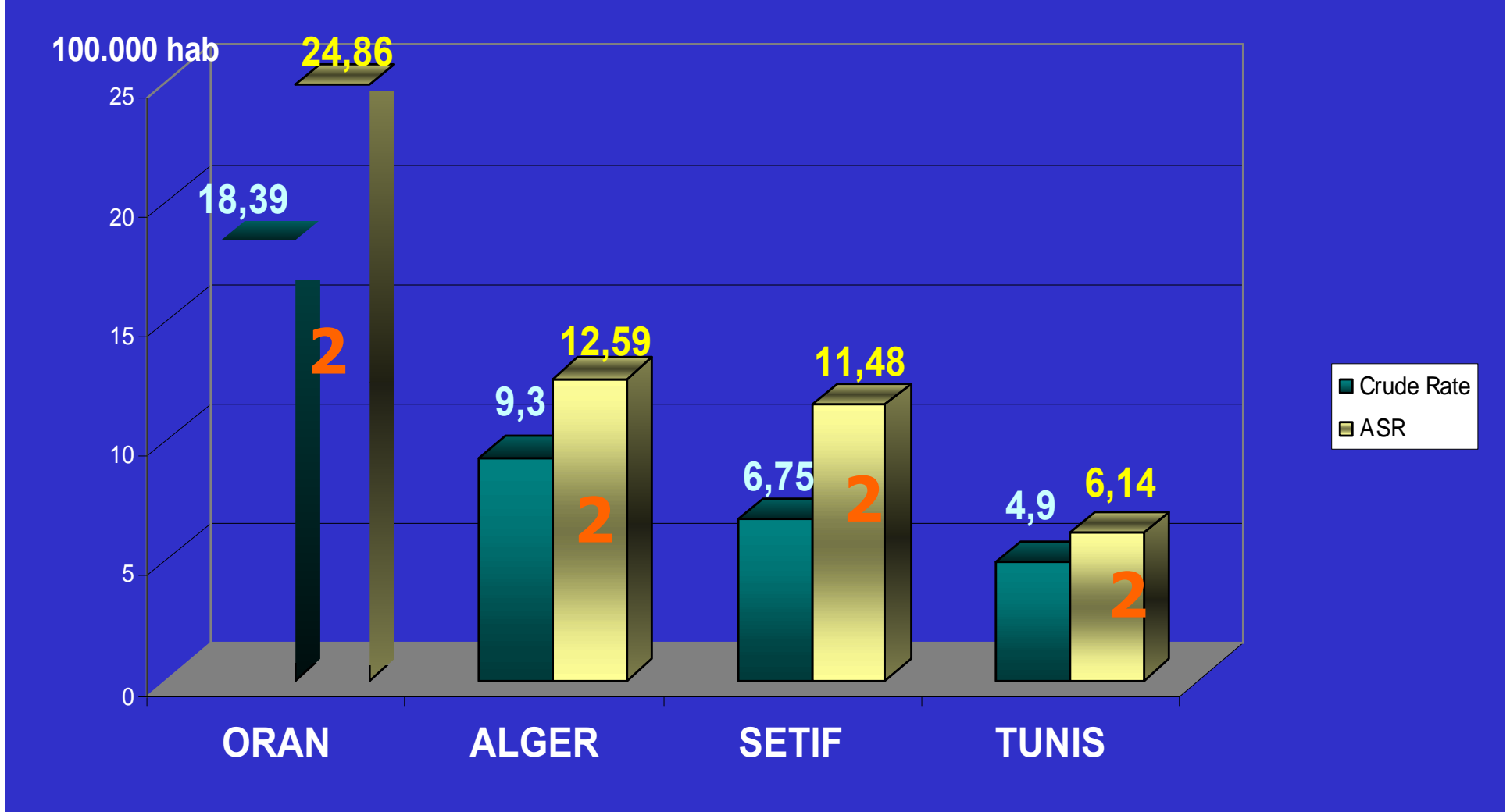


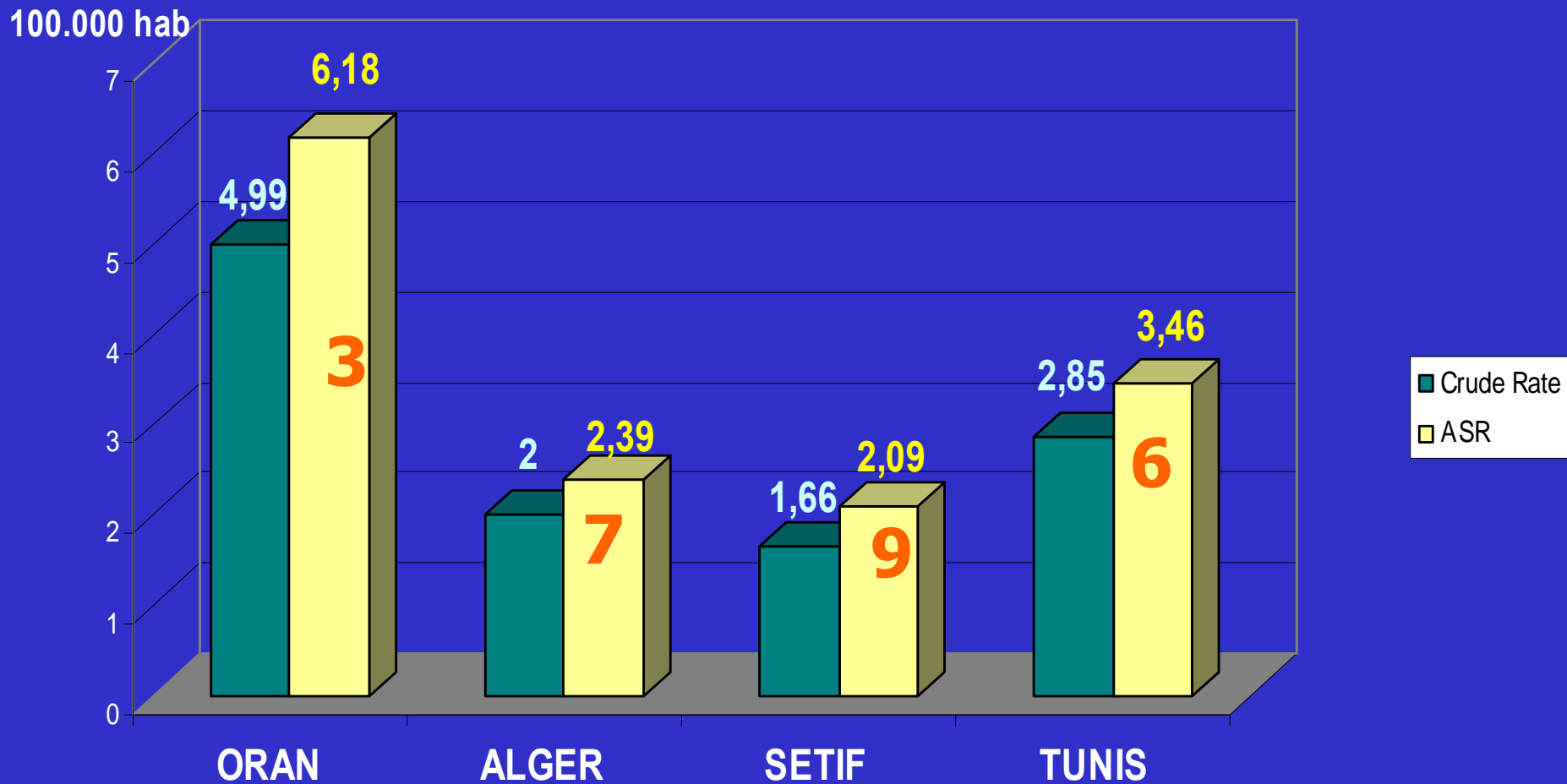


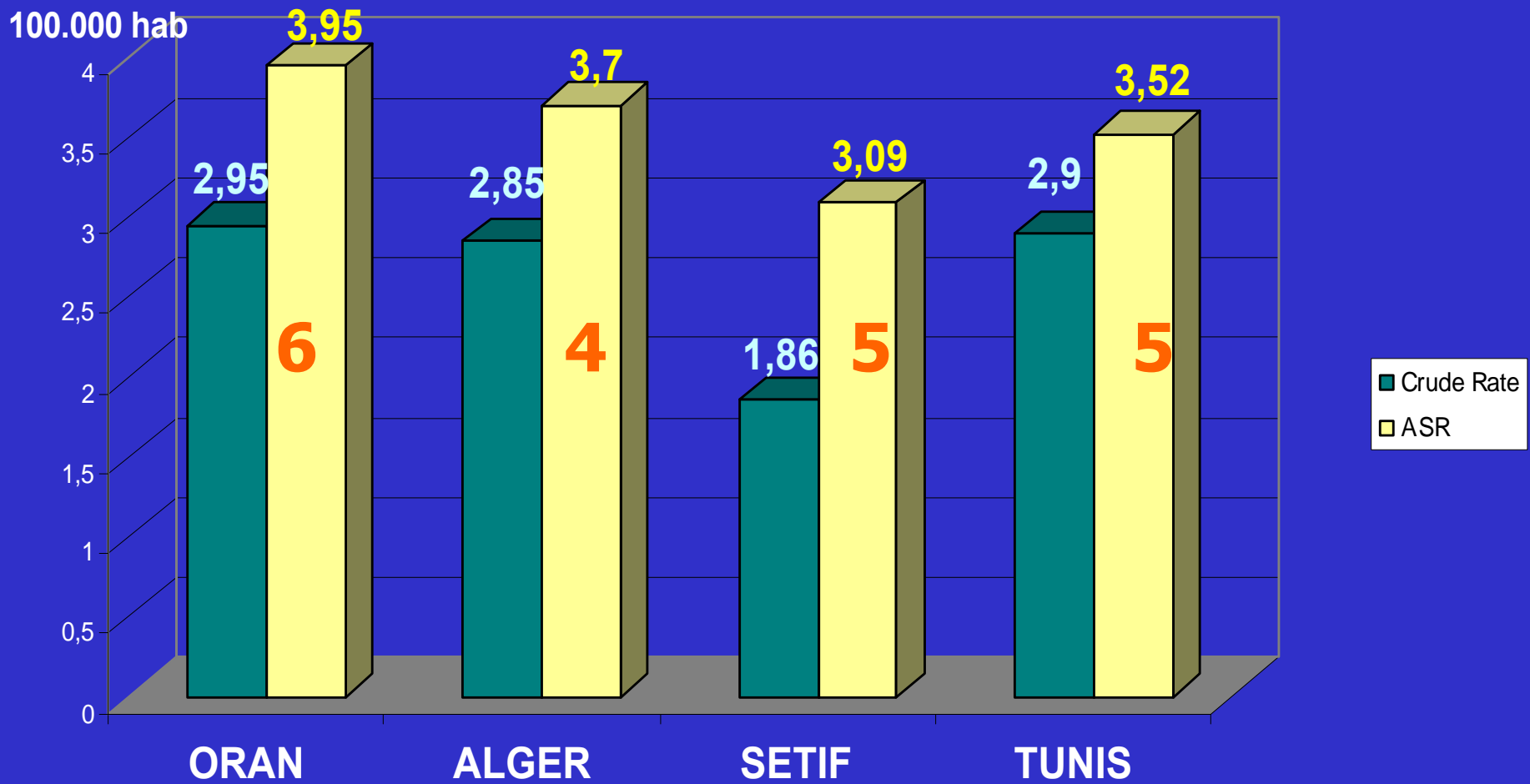
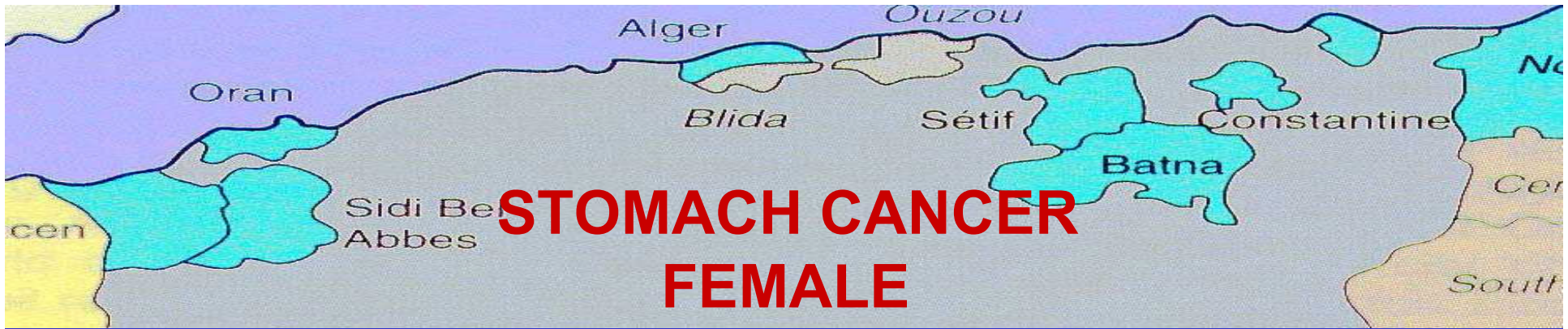
COMMONLY CANCERS IN FEMALE

ORAN	ALGER	SETIF	TUNIS	GLOBOCAN
Breast	Breast	Breast	Breast	Breast
Cervix uteri	Cervix uteri	Cervix uteri	Cervix uteri	Cervix uteri
NHL	Thyroid	Gallbladder	Leukaemia	Colon / Rectum
Gallbladder	Stomach	Ovary	Colon	Ovary
Thyroid	Rectum	Stomach	Stomach	Stomach
Stomach	Colon	Leukaemia	NLH	NLH
Ovary	NLH	Rectum	Rectum	Thyroid
Rectum	Bladder	Nasopharynx	Gallbladder	Lung
Nasopharynx	Utérus	NLH	Ovary	Utérus
Colon	Lung	Colon	Thyroid	Nasopharynx











CHILDHOOD CANCER Setif, Algeria.

Cancers Male						Taux pour 1million	
	0	1-4 ans	5-9 ans	10-14 ans	Total	Brut	ASR
Leukaemia	2	10	17	4	33	21,7	22,92
lymphoïd Leukaemia	2	10	15	3	30	19,7	23,52
Myéloïd Leukaemia	0	0	2	1	3	2,0	2,17
LymphomA	1	7	9	12	29	19,0	18,77
Hodgkin	0	3	5	6	14	9,2	10,49
NLH	1	4	4	6	15	9,8	11,50
Brain and Spinal neoplasms	2	8	7	7	24	15,8	16,65
Ependymome	0	0	1	0	1	0,7	0,73
Astrocytome	0	5	0	5	10	6,6	7,86
Gliome	1	1	2	0	4	2,6	3,20
Médulloblastome	0	1	3	1	5	3,3	3,77
Indéterminé	1	1	1	1	4	2,6	3,17
Tumeurs du système nerveux sympathique							
Neuroblastoma	1	5	1	1	8	5,3	6,64
Tumeurs rénales	4	3	2	1	10	6,6	7,82
Néphroblastome	4	3	2	1	10	6,6	8,24
Adénocarcinome	0	0	0	0	0	0,0	0
Other Tumours	2	4	1	1	8	5,3	0,65
Rhabdomyosarcome	0	1	1	0	2	1,3	3,47
Hépatoblastoma	2	1	0	0	3	2,0	3,47
Séminome	0	2	0	0	2	1,3	3,47
Rétinoblastoma	0	0	0	0	0	0,0	0,00
Histiocytose X	0	0	0	1	1	0,7	0,87
Sarcome d'Ewing	0	0	0	0	0	0,0	0,00
Total	23	69	73	51	112	73,5	103

Cancers Female						Taux pour 1million	
	0	1-4 ans	5-9 ans	10-14 ans	Total	Brut	ASR
Leukaemia	2	8	14	4	28	19,2	20,16
Lymphoïd Leukaemia	1	8	12	1	22	15,09	18,04
Myéloïdes Leukaemia	1	0	2	3	6	4,12	4,65
Lymphoma	0	5	2	5	12	8,2	8,55
Hodgkin	0	1	0	1	2	1,37	1,64
NLH	0	4	2	4	10	6,86	8,10
Tumeurs cérébrales	1	1	4	2	8	5,5	5,46
Ependymome	0	0	1	1	2	1,37	1,51
Astrocytome	0	0	2	0	2	1,37	1,53
Gliome	1	0	1	1	3	2,06	2,41
Médulloblastoma	0	0	0	0	0	0,00	0,00
Indéterminé	0	1	0	0	1	0,69	0,90
Tumeurs du système nerveux sympathique							
Neuroblastome	2	4	0	1	7	4,80	6,15
Tumeurs rénales	0	12	3	1	16	11,0	13,28
Néphroblastome	0	11	3	1	15	10,29	12,95
Adénocarcinome	0	1	0	0	1	0,69	0,90
Autres tumeurs	1	2	1	1	5	3,4	0,65
Rhabdomyosarcome	0	2	1	0	3	2,06	5,21
Hépatoblastome	0	0	0	0	0	0,00	0,00
Séminome	0	0	0		0	0,00	0,00
Rétinoblastoma	1	0	0	0	1	0,69	0,87
Histiocytose X	0	0	0	0	0	0,00	0,00
Sarcome d'Ewing	0	0	0	1	1	0,69	0,87
Total	10	60	48	27	76	52,1	82

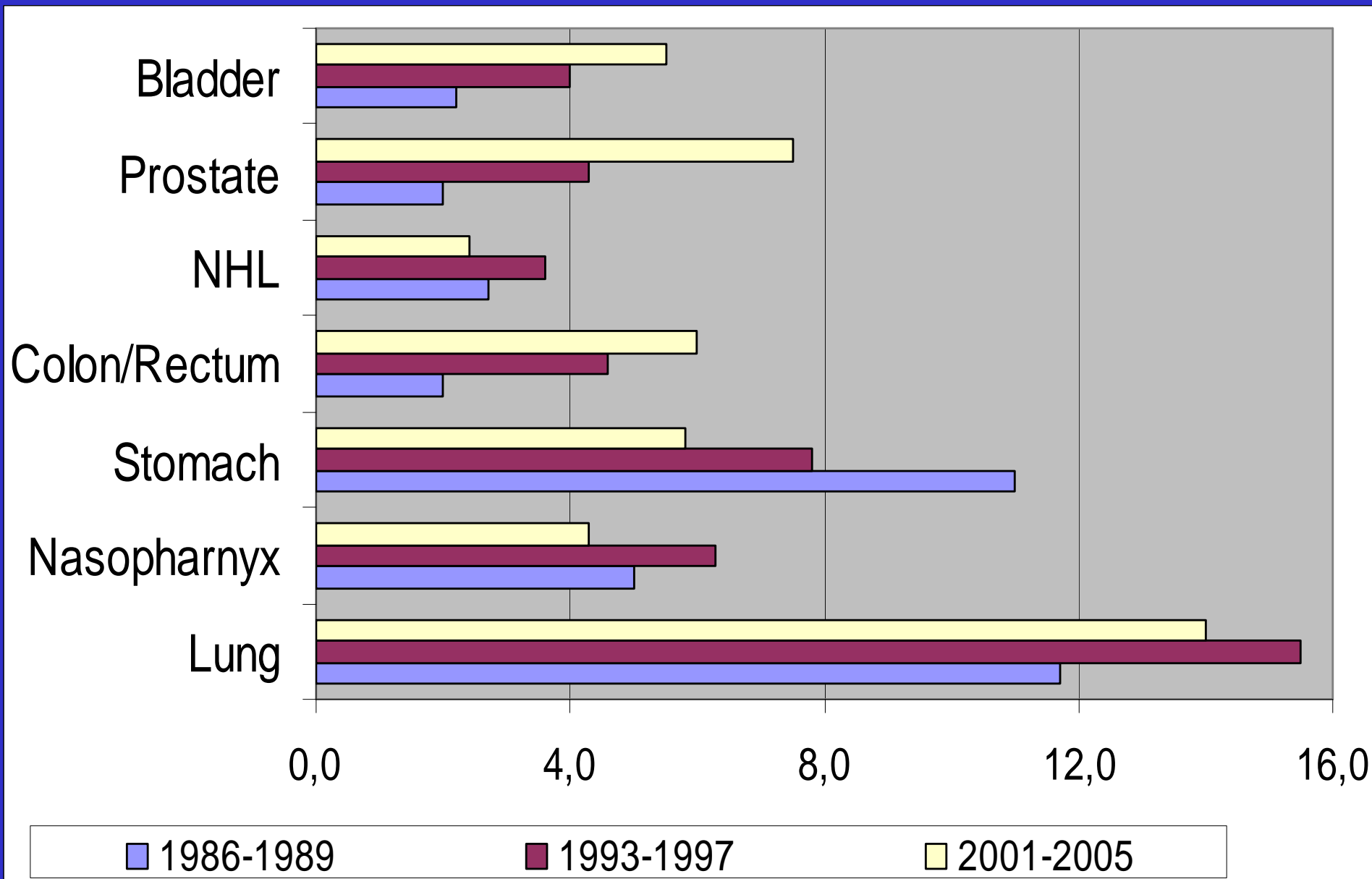
Evolution of Incidence cancer from 1986 to 2005

Male Setif, Cancer Registry, Algeria.

Period	1986-1989			1993-1997			2001-2005		
Site	<i>Case</i>	<i>%</i>	<i>ASR</i>	<i>Case</i>	<i>%</i>	<i>ASR</i>	<i>Case</i>	<i>%</i>	<i>ASR</i>
Lung	121	14.3	11.7	246	18.1	15.5	282	14.4	14.0
Nasopharynx	58	6.8	5.0	134	9.8	6.3	108	5.5	4.3
Stomach	115	13.5	11.0	131	9.6	7.8	123	6.3	5.8
Colon/Rectum	23	2.7	2.0	82	6.0	4.6	142	7.2	6.0
NHL	39	4.6	2.7	79	5.8	3.6	87	4.4	2.4
Prostate	21	2.5	2.0	71	5.2	4.3	157	8.0	7.5
Bladder	24	2.8	2.2	62	4.6	4.0	108	5.5	5.5
All Sites	874		74.4	1416		78.5	1958		87.4

Evolution of Incidence cancer from 1986 to 2005

Male Setif, Cancer Registry, Algeria.



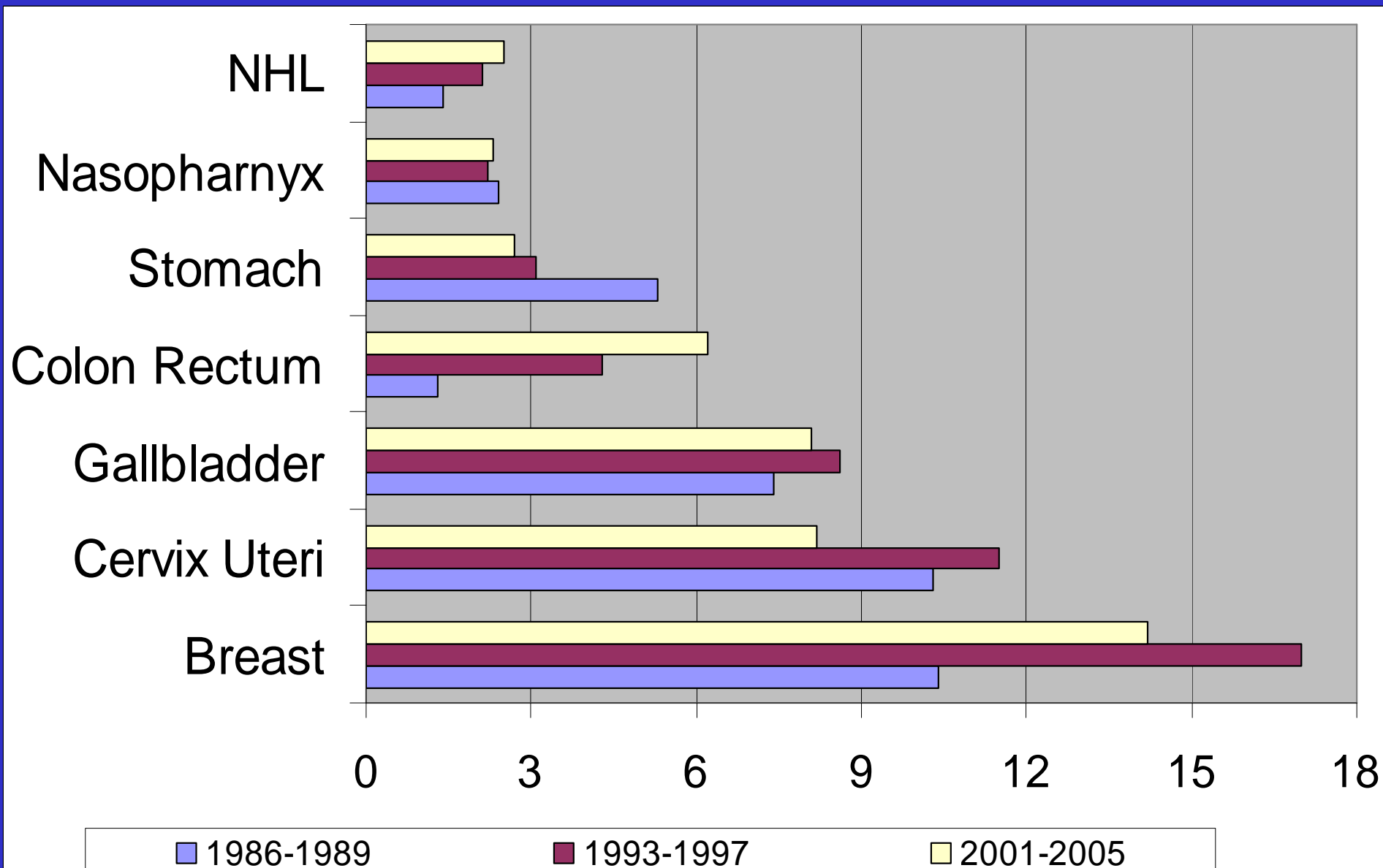
Evolution of Incidence cancer from 1986 to 2005

Female Setif, Cancer Registry, Algeria.

Periode	1986-1989			1993-1997			2001-2005		
Site	<i>Case</i>	<i>%</i>	<i>ASR</i>	<i>Case</i>	<i>%</i>	<i>ASR</i>	<i>Case</i>	<i>%</i>	<i>ASR</i>
Breast	187	10.3	10.4	317	22.2	17.0	338	7.0	14.2
Cervix Uteri	128	15.1	10.3	203	14.2	11.5	171	9.9	8.2
Gallbladder	84	9.9	7.4	152	10.7	8.6	171	9.9	8.1
Colon Rectum	17	3.2	1.3	89	6.02	4.3	149	8.5	6.2
Stomach	66	7.8	5.3	56	3.9	3.1	60	3.5	2.7
Nasopharynx	35	4.1	2.4	51	3.6	2.2	37	2.1	2.3
NHL	24	2.8	1.4	50	3.5	2.1	63	3.6	2.5
Thyroid	18	2.1	1.1	36	2.5	1.7	111	6.4	4.3
All Site	862		65.4	1449		74.8	1735		73.2

Evolution of Incidence cancer from 1986 to 2005

Female Setif, Cancer Registry, Algeria.



Survival Study

Setif, Cancer Registry, Algeria.

First survival study IARC 1986 1989

Relative survival

commonly sites

Site	Setif, Algeria 1986 - 1993	Khoen Kaen 1985 - 1992	Shanghai 1988 - 1991	Cuba 1988 - 1989	Madras 1984 - 1989	Rizal 1987	US Whites 1983 - 1988	US Black 1983 - 1988	Scotland 1983 - 1987
Oral cavity/ & nasopharynx	28,4	38,9					55,7	29,3	47,3
Stomach	8,9	23,4	23,9		7,8	12,0	17,2	19,0	12,8
Liver	2,7	9,2	4,4			14,7	5,9	3,5	4,2
Cervix	41,5	60,1	51,9	55,9	60,0	29,0	69,2	56,8	61,0
Ovaries	31,0	41,6	44,2	43,3			53,7	51,5	44,7
G. Bladder	11,6	56,9	9,5				82,9	61,6	69,4
Breast	35,8	47,1	72,0	60,8	49,5	45,6			

Second survival study

Cancer Survival in Five Continents

The CONCORD Study

**Population coverage and number of patients
diagnosed aged 15-99 years with cancer
during 1990-1994**

Following 1999

Survival cancer Cocord study 1990-1994

	Breast	Colon		Rectum		Large Bowl		Prostate
	Women	Men	Women	Men	Women	Men	Women	
Algeria : Sétif	38.4	11.4	30.6	25.9	22.5	18.2	22.6	19.6
Canada	82.7	56.2	58.4	54.0	58.7	55.6	58.5	86.2
Cuba	78.3	59.1	61.5	59.3	61.8	59.2	61.6	83.8
Japan	82.2	65.3	58.2	60.0	59.3	63.2	58.5	51.9
France	82.6	57.7	59.2	53.5	63.0	56.0	60.6	76.3

PERSEPECTIVES OF DEVELOPMENT

New regional cancer centre and Hope Lodge to be built in Setif, Algeria.

March 2004 international forum on cancer, in partnership with UICC.

Algerian authorities recognised the need for a regional cancer centre in Setif and to fund its construction.

The Sétif centre will cover a region of 5 million inhabitants and treat from 5,000 new cancer cases each year.

The centre will also provide a Hope Lodge, where patients with little or no financial means can be provided with food, lodging, access to care and psychological support during their treatment, which can last up to several weeks.

04 other cancer centres are planed in Algeria.

In Morocco three cancer centres are also planed

DISCUSSION

§ For the commonly sites in North Africa, the first commonly sites are found in the four registries.

§ Concerning the data of incidences, the incidence rates raised on the areas where exist Traitment Centers of Cancer

- Over-estimated rates in area where the traitment of cancer is available Oran, Algiers and Tunis.
- Under estimated: the registry of Setif where the radiotherapy is not available.

CONCLUSION

These incidence rates of cancer in North Africa confirm the importance of the problem and should determine the priorities in the development of:

- Diagnosis and treatment of cancer*
- primary and secondary prevention*
- research*

The first commonly sites (lung, breast, cervix) are avoidable by actions of **prevention** (tobacco control) and **screening**.