

**OVERVIEW OF HIV EPIDEMIC IN  
ROMANIA- EXPERIENCE WITH  
LONG TERM SURVIVORS -  
TEENAGERS AN YOUNG ADULTS**

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Data in Romania - INBI “Prof.Dr.M.Balș”**

- At a global level, HIV infection is constantly expanding, with an epidemiologic profile set by local and regional factors.
- According to UNAIDS estimates, at the end of 2009 there were over 33 million PLWHA worldwide, compared to 26 million PLWHA reported in 1999 (a 27% increase in this number).
- At the end of 2009, the estimated number of HIV positive children was calculated at the value of 2,5 million, while the proportion of women living with HIV/AIDS apparently remained stable, namely 15,9 million.
- Unlike the infections in other Eastern and Central European Countries, HIV/AIDS infection in Romania is a different phenomenon.

- The specificity of the epidemic consists of a high rate of HIV incidence at children, infected at the end of the 1980s, the maximum number of these patients having been recorded in the beginning of the 1990s.
- During the same period the rate of HIV incidence among the adult population was low, with a significant increase afterwards, by heterosexual contact.
- According to the data provided by Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania, in National Institute of Infectious Diseases Prof. Dr. Matei Bals, at 31 December 2010 16.697 cumulative cases of HIV/AIDS cases were recorded, with a figure of 10.405 people living with HIV/AIDS.
- Recent information released by UNAIDS (December 2009) ranks the number of PLWHA in Romania between 12.000-16.000 persons.

- The difference between the number of the diagnosed patients and the estimates is relatively small next to other Central and Eastern European countries.
- The rate of HIV prevalence at adults was somewhere below 0.1% , at 31 December, 2010.
- Currently, Romania has a large number of survivors, integrated in the 19-24 age group, who belong to the 1987-1990 cohort (>6000) and a large number of PLWHA who receive specific ARV therapy in relation to the total number of infected persons (>7000).
- Due to an optimal therapy administration, the mean period of survival has increased from 3 month is 1990-2000 to 84 months today.

- The current tendencies of the HIV/AIDS infection in Romania are:
  - The same main way of transmission for adults - unsafe heterosexual contact- 75% of the new cases.
  - A slight increase in the vertical transmission (mother to child)- 5%.
  - The transmission for the IDU group has the same value- 3%.
  - A doubled number of infections among the MSM group compared with 2007, namely from 3,8%- 10% (in 2010).
  - An overall increase of PLWHA who require specific medical services and ARV therapy.

- ✓ Due to the epidemiologic particularity, namely *the long term survivals*, who have experienced multiple therapeutic schemes, the problem of ART resistance is major, with many implications in the design of potent therapeutic schemes.

**MINISTRY OF HEALTH**  
**NATIONAL INSTITUTE OF INFECTIOUS DISEASES “PROF.DR.MATEI BALȘ”**  
**Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania**  
**GENERAL DATA AT 31 DECEMBER 2010**

<b>TOTAL HIV/AIDS CASES (CUMULATIVE 1985-2010) <u>OUT OF WHICH:</u></b>	<b>16697</b>
HIV/AIDS CASES at children (0-14 years at diagnosis date)	9837
HIV/AIDS CASES at adults (> 14 years at diagnosis date)	6860
<b>Total no. of AIDS deaths</b>	<b>5707</b>
Out of records HIV/AIDS children + adults	585
<b>NUMBER OF PLWHA (people living with HIV/AIDS)</b>	<b>10405</b>
<b>TOTAL AIDS CASES (CUMULATIVE 1985-2010)</b>	<b>12068</b>
AIDS Cases at children (0-14 years at diagnosis date)	7897
AIDS Cases at adults (> 14 years at diagnosis date)	4171
<b>TOTAL HIV CASES (CUMULATIVE 1992-2010)</b>	<b>4629</b>
HIV Cases at children (0-14 years at diagnosis date)	1940
HIV Cases at adults (> 14 years at diagnosis date)	2689
<b>NEW HIV/AIDS CASES, diagnosed during 01.01 – 01.12.2010</b>	<b>440</b>
<b>NEW HIV NOTIFIED CASES</b>	<b>241</b>
<b>NEW AIDS NOTIFIED CASES</b>	<b>199</b>
<b>NUMBER OF DEATHS IN 2010 (01.01-01.12.2010)</b>	<b>124</b>

Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI “Prof.Dr.M.Balș”



**MINISTRY OF HEALTH**

**NATIONAL INSTITUTE OF INFECTIOUS DISEASES "PROF.DR.MATEI BALȘ"**

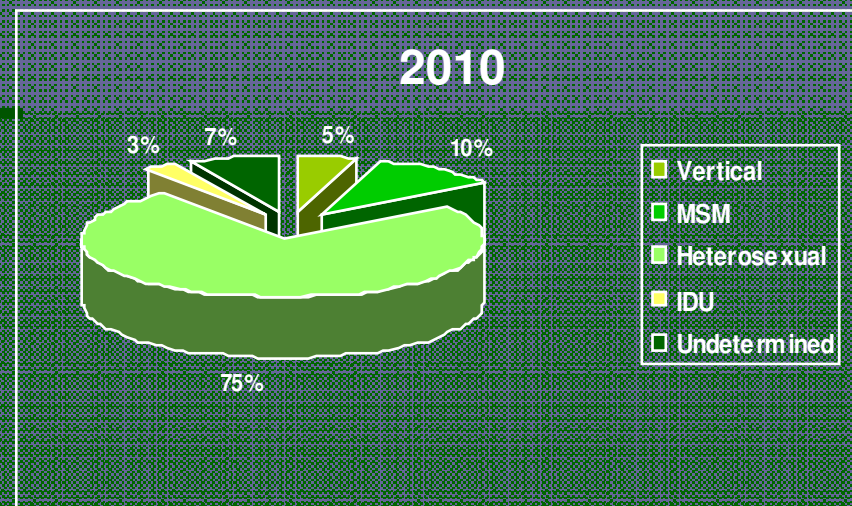
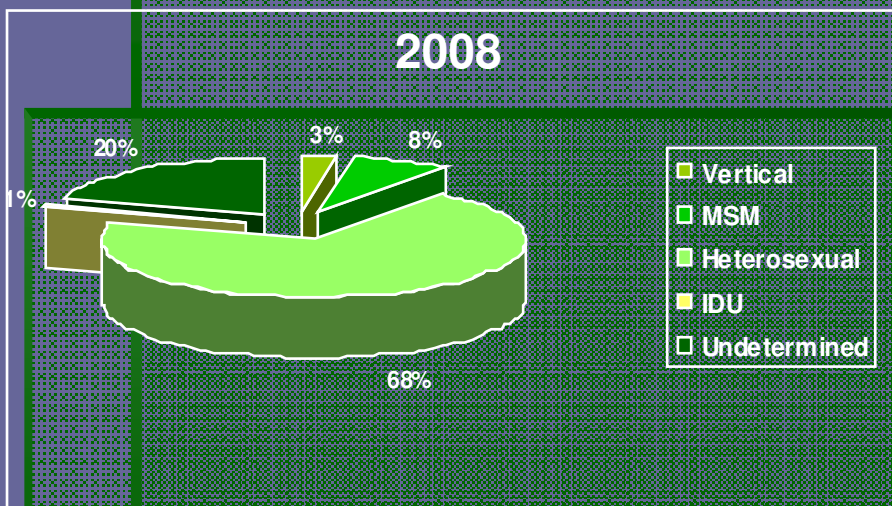
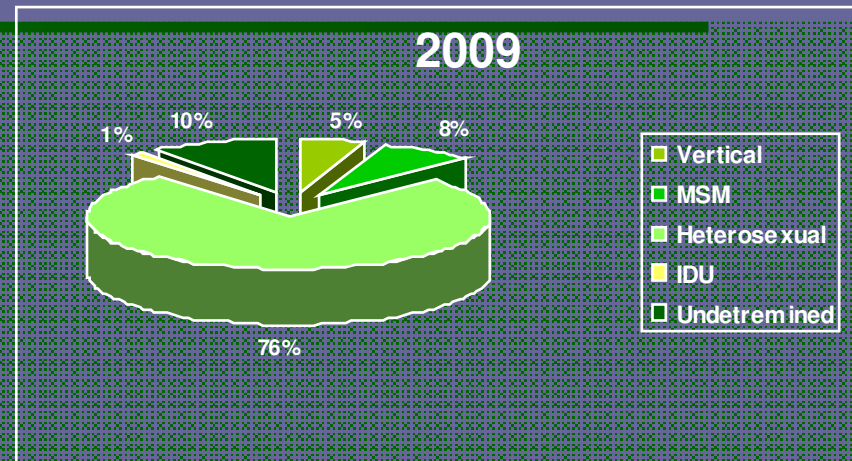
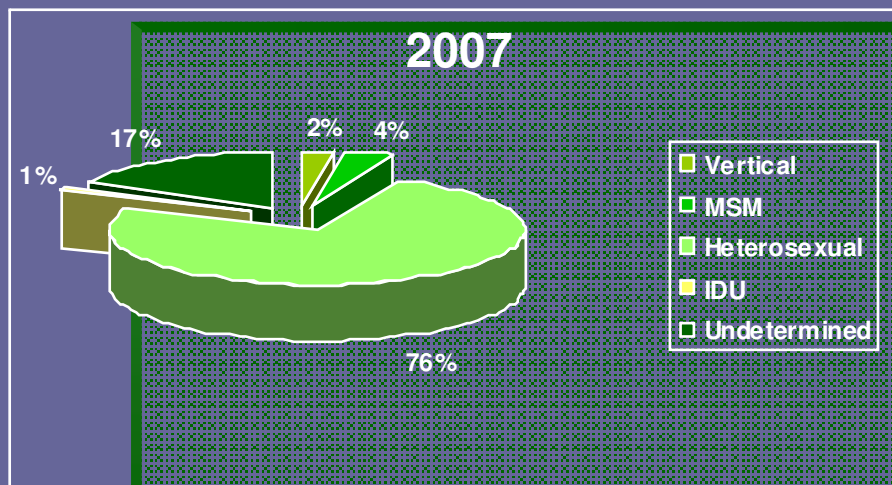
**Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania**

**GENERAL DATA AT 31 DECEMBER 2010**

<i>Patients in active records HIV+AIDS</i>	<b>8.916</b>
<i>Children (0-14 years*)</i>	249
<i>Adults(&gt; 14 years*)</i>	8.667
<i>Patients with ARV treatment</i>	<b>7.276</b>
<i>Children (0-14 years*)</i>	185
<i>Adults (&gt; 14 years*)</i>	7.091
Persons who received ARV prophylaxis	<b>614</b>
Persons who discontinued the ARV treatment	<b>650</b>

\*current age

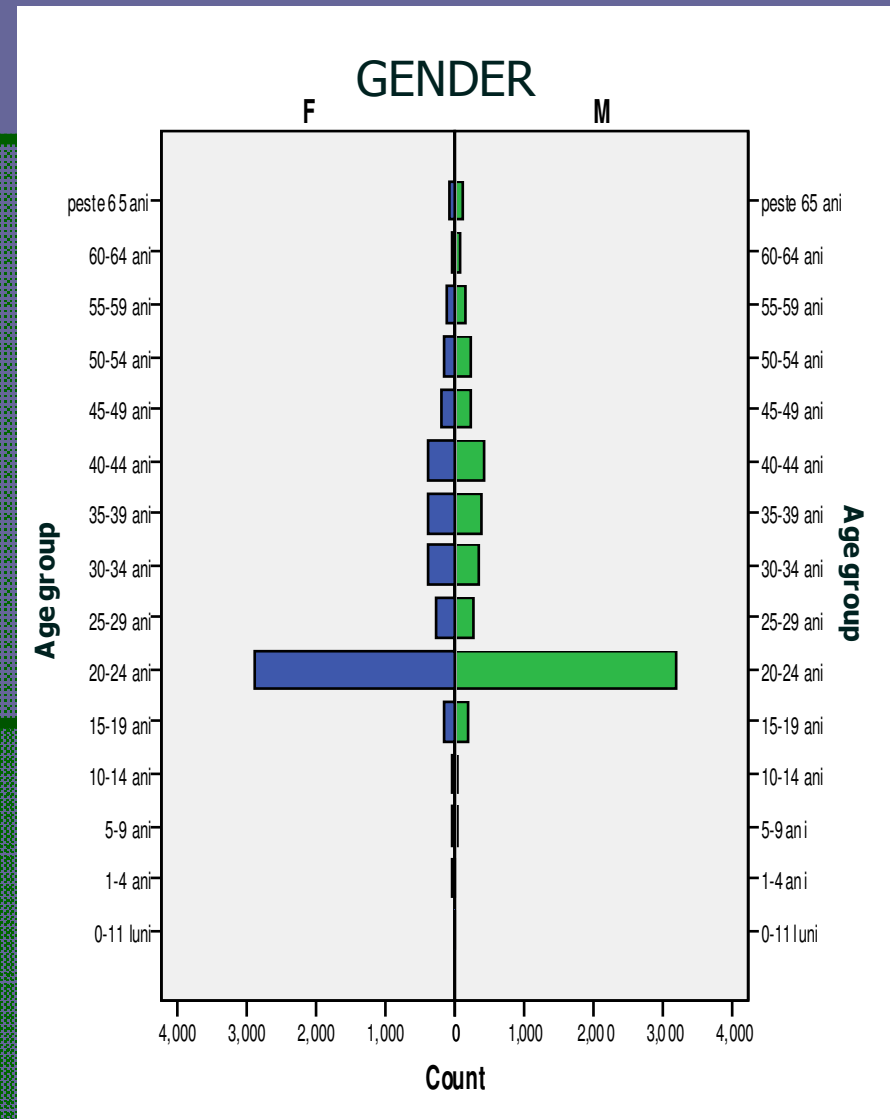
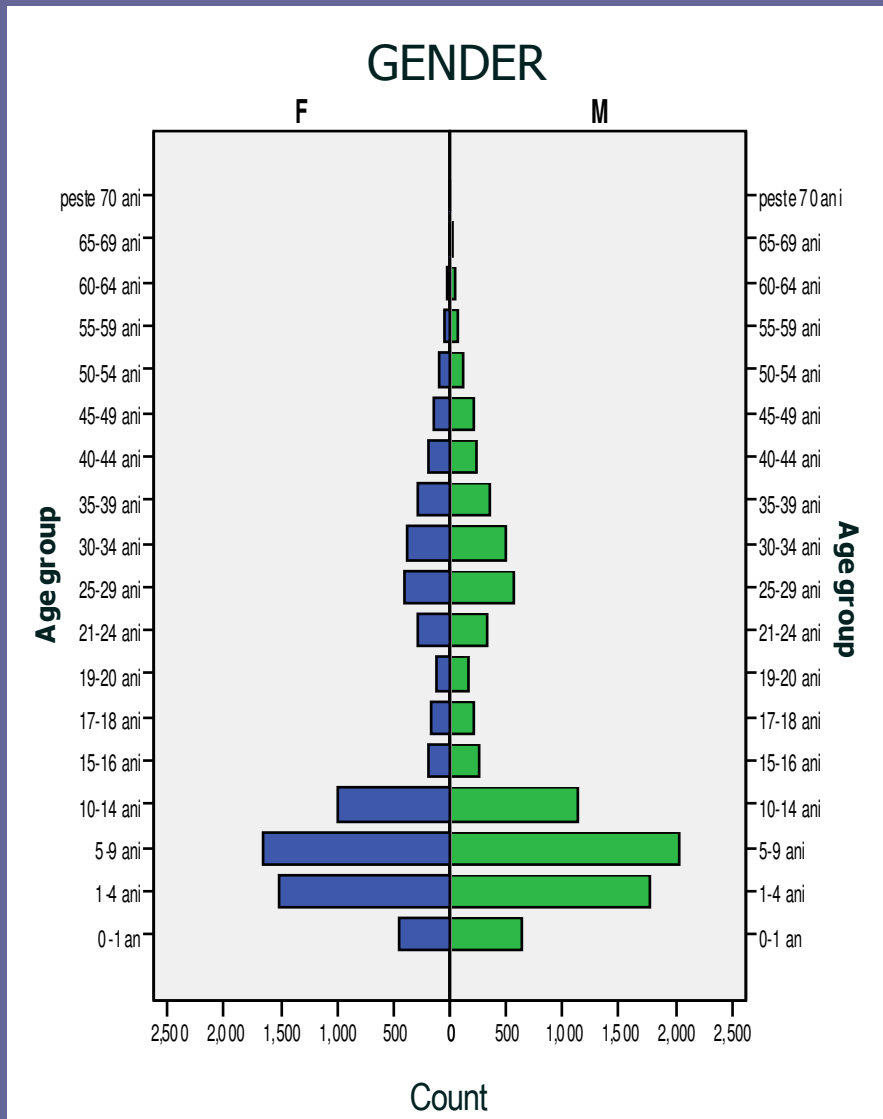
# TENDENCES OF THE TRANSMISSION WAY IN ROMANIA 2007-2010



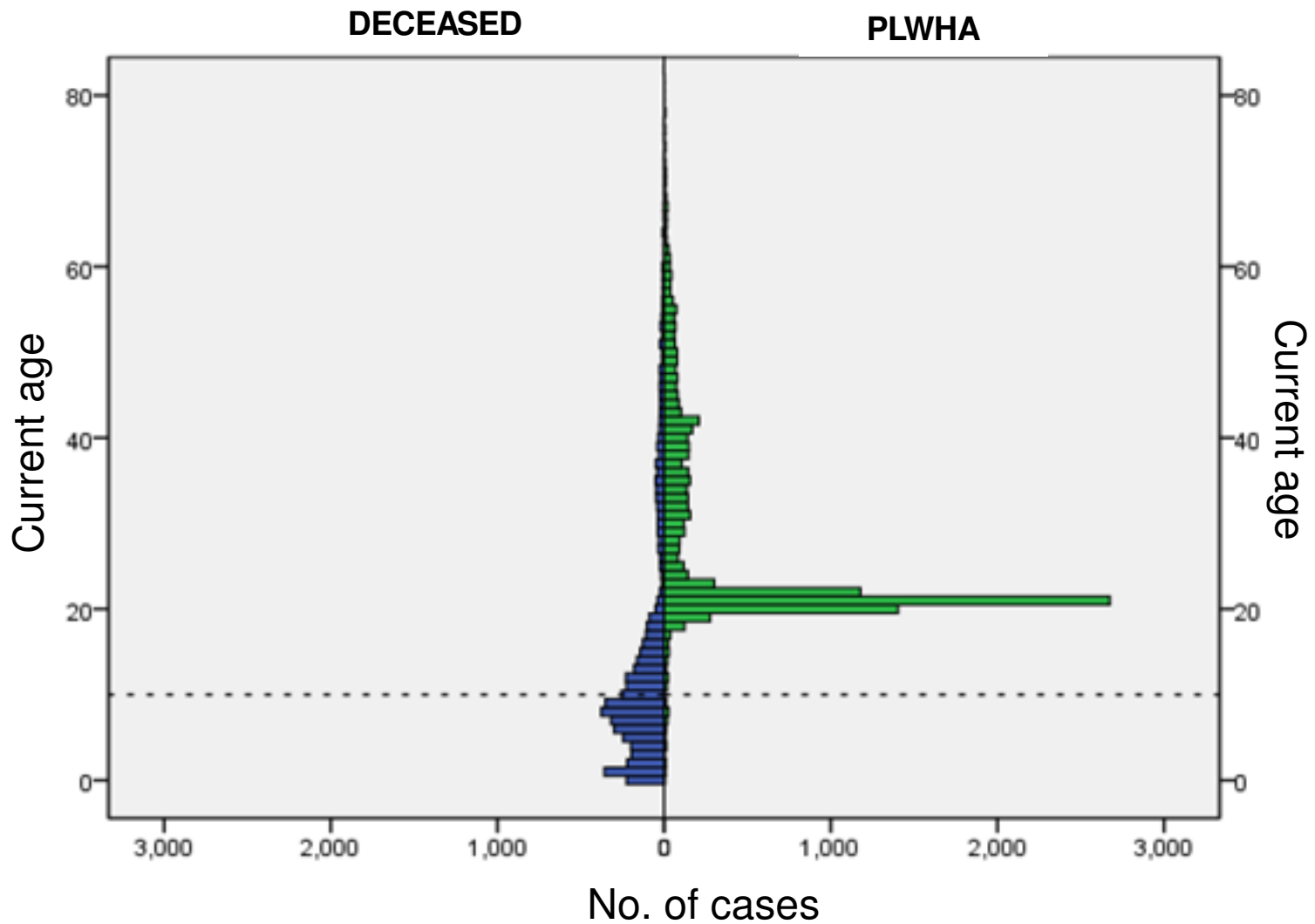
# AGE PYRAMID – TOTAL – 31 DECEMBER 2010

AGE AT DISCOVERY/NOTIFICATION DATE  
TOTAL 1985-2010

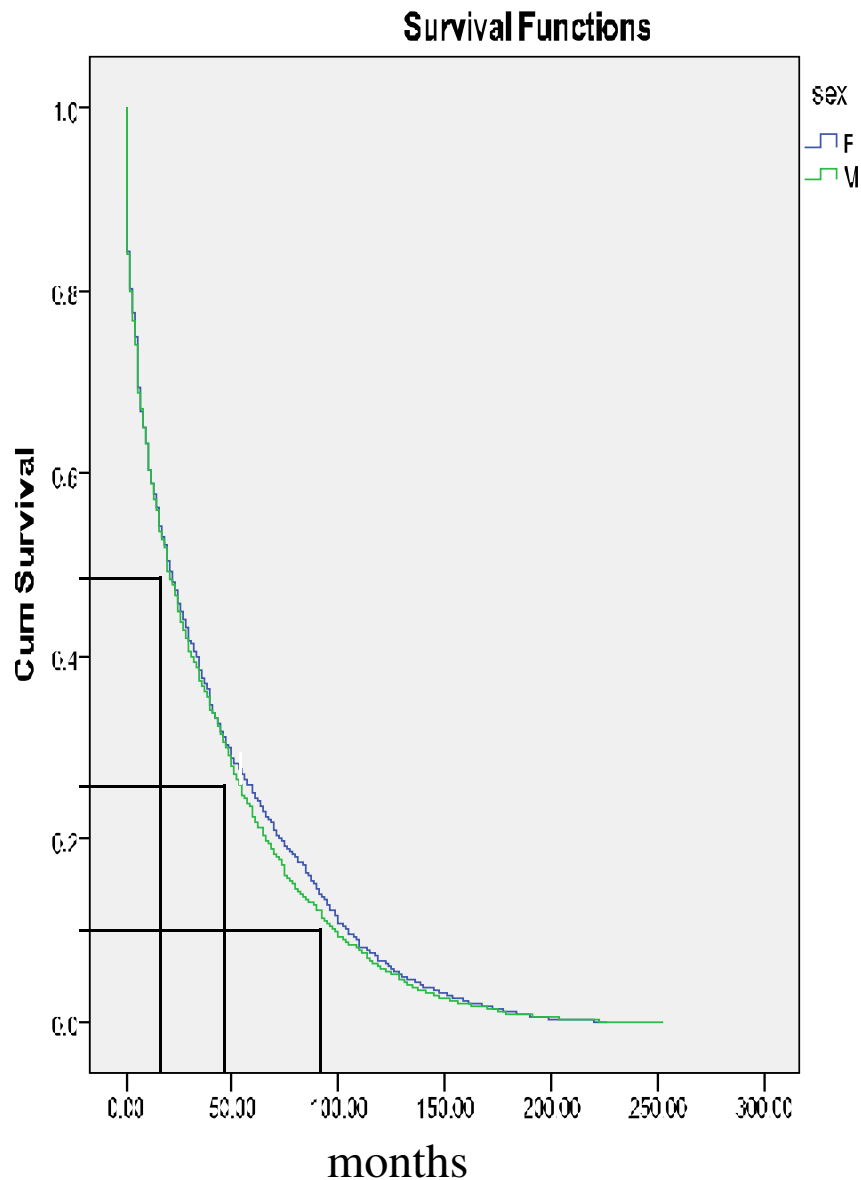
CURRENT AGE



# AGE PYRAMID (deceased patients vs.PLWHA) BY CURRENT AGE



# Analysis of the survival rate, Kaplan-Meier type



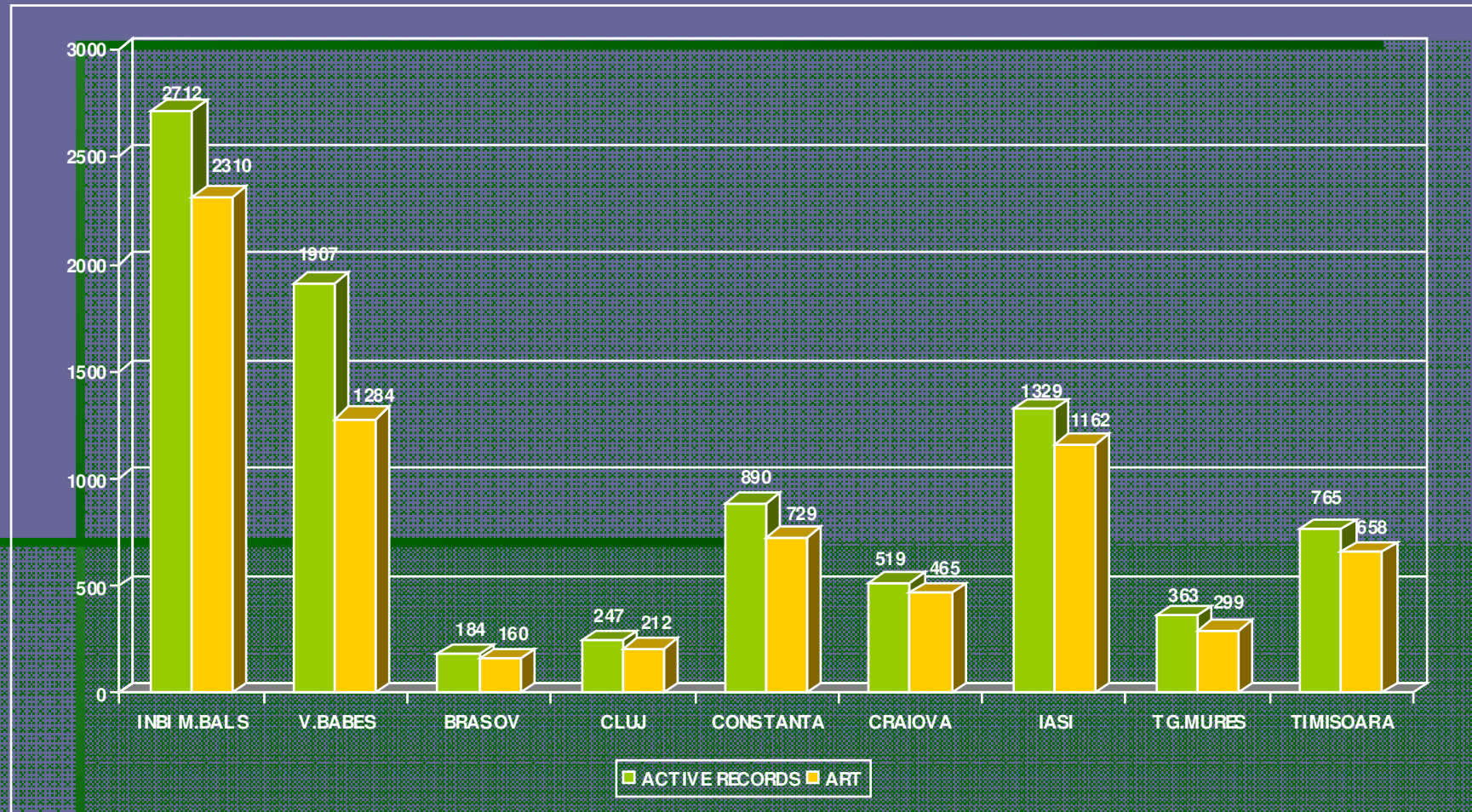
- 50% of deaths had a mean period of survival (POS) < 50 months;
- 25% of deaths had a mean POS of 50 months;
- 10% of deaths had a mean POS  $\geq$  100 months;
- Limits: periods without treatment, ARV schemes, duration of treatment are excluded
- Mean POS = 37.4 months (C.I.95% 35,1-38,1)
  - Mean POS for men = 36,6 months (C.I.95% 35,1-38,1)
  - Mean POS for women = 38,6 months (C.I.95% 36,7-40,5)

# DISCOVERY OF NEW CASES BY THE TEST YEAR AND AGE

Vârsta	ANUL TESTĂRII																					
	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10
0	160	612	90	30	24	19	17	10	12	16	16	9	7	12	10	6	9	11	4	4	3	12
1	107	803	189	62	46	10	7	3	6	5	4	1	2	2	5	4	3	0	0	1	0	2
2	17	301	259	149	38	7	7	4	3	5	1	1	4	1	2	3	2	2	0	0	0	4
3	0	40	143	251	135	22	14	2	3	1	0	3	1	3	2	1	1	2	0	0	3	1
4	0	8	25	112	235	140	40	17	6	2	8	1	1	0	2	0	2	1	3	0	1	0
5	0	5	9	23	123	308	152	37	14	5	7	3	1	1	0	2	0	1	0	1	0	0
6	0	1	0	7	25	154	366	200	42	12	2	1	3	1	1	0	1	1	0	2	1	1
7	0	0	1	3	4	32	173	315	196	43	13	1	1	1	0	1	0	1	0	0	1	1
8	1	0	1	1	5	8	38	149	316	189	27	9	4	0	0	2	0	0	0	0	1	0
9	0	1	1	0	1	3	15	34	154	248	143	25	5	4	2	1	4	1	1	1	1	0
10	2	0	1	2	0	1	7	9	30	99	209	135	32	9	1	0	0	0	0	0	0	1
11	1	0	1	1	0	0	5	3	13	20	79	212	130	13	5	0	0	0	1	0	0	1
12	0	1	0	0	1	3	3	6	8	3	27	83	154	92	16	8	5	0	0	0	0	0
13	0	1	2	1	2	2	0	4	3	3	9	21	80	132	80	9	3	0	0	0	1	0
14	0	0	2	0	1	2	5	5	4	1	6	12	16	72	119	55	12	5	1	0	1	0
15	1	2	0	0	0	1	3	6	1	9	11	5	11	10	44	93	39	9	0	0	0	1
16	16	3	1	0	0	1	3	1	0	4	6	3	6	3	20	36	59	33	9	2	3	4
17	0	1	0	0	1	1	2	2	4	5	3	6	5	7	8	10	31	56	25	12	9	3
18	0	3	1	1	4	1	1	7	7	3	14	4	6	10	6	7	10	26	42	24	16	5
19	1	6	2	2	1	2	4	5	7	2	11	5	9	5	5	8	10	14	19	34	36	8
20	1	5	2	2	2	4	3	8	6	4	8	7	8	11	4	3	6	11	10	24	29	30
21	6	2	5	2	2	4	6	8	4	11	8	15	9	9	9	9	8	6	6	14	24	39

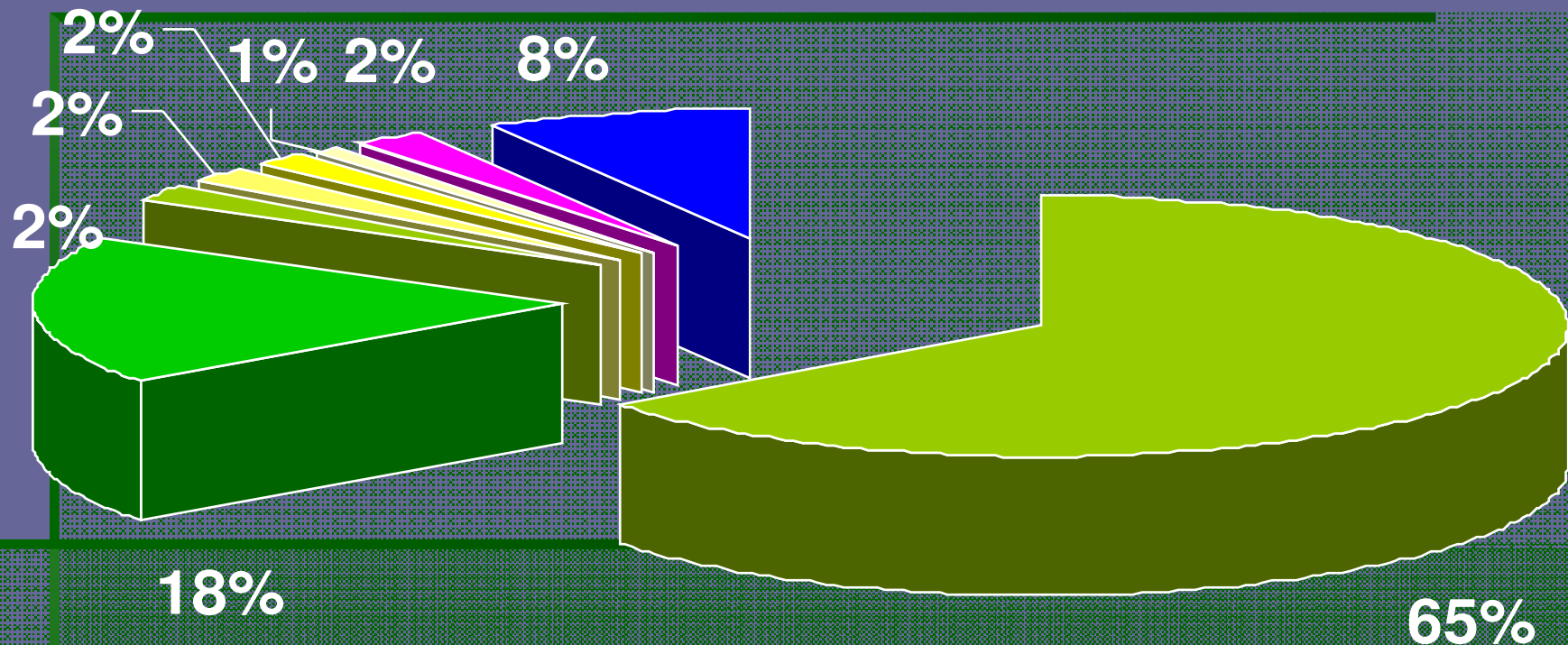
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof. Dr. M. Balș"

# PATIENTS WITH ART AND IN ACTIVE RECORDS BY REGIONAL CENTRES – 31 DECEMBER 2010



Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# ARV SCHEMES AT 31 DECEMBER 2010



- 2 INRT + 1 IP/r
- 1 INRT + 1 INNRT + 1 IP/r
- 3 INRT
- 2 INRT + 1 IP/r + 1 II

- 2 INRT + 1 INNRT
- 3 INRT + 1 IP/r
- 2 INRT + 1 INNRT + 1 IP/r
- ALTELE

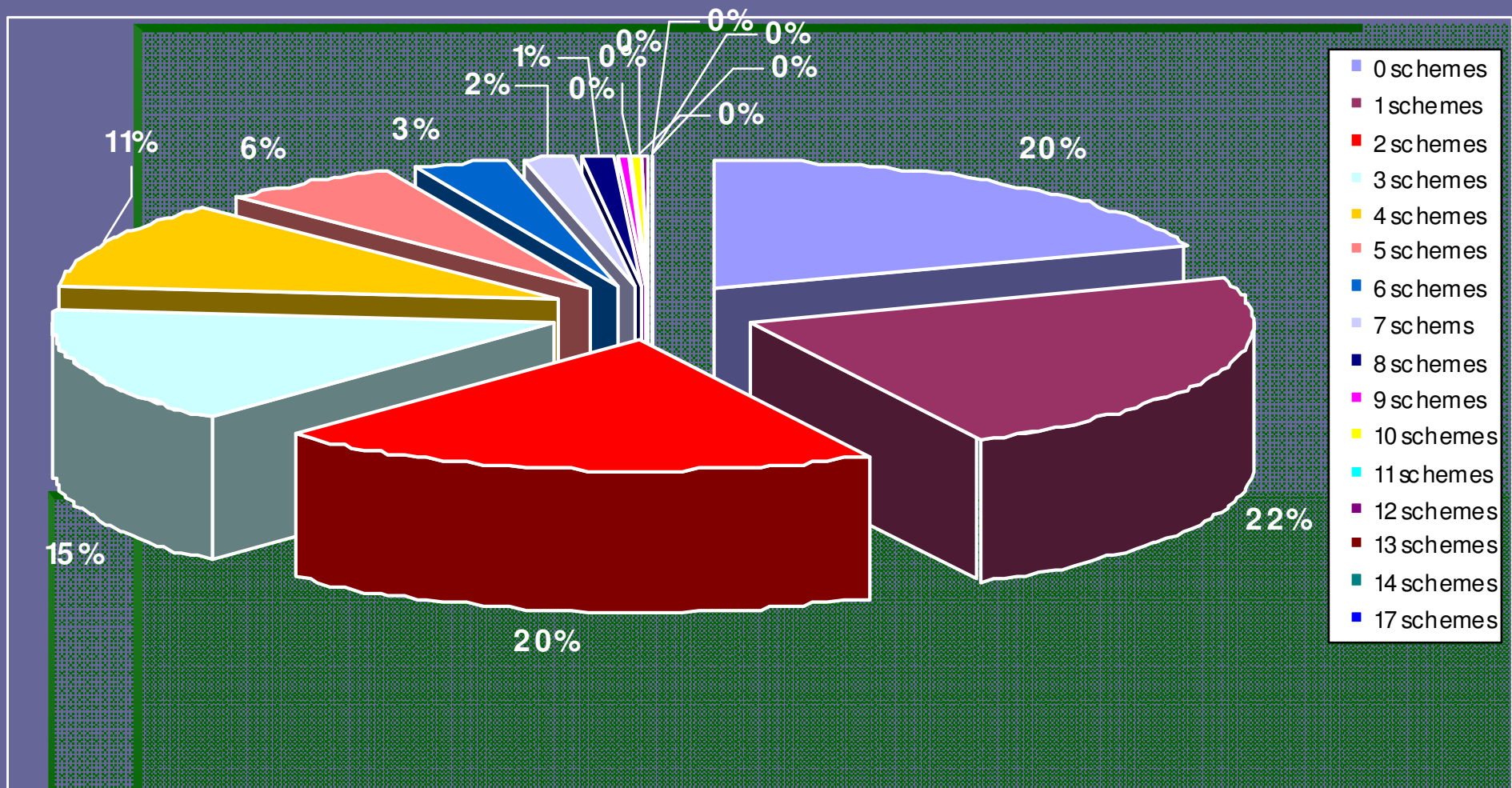


# PATIENTS IN ART, ASSESSED FOR CD4 AND VL IN 2010 - BY REGIONAL CENTERS

REGIONAL CENTER	INBI M.BALS	V.BABES	BRASOV	CLUJ	CONSTANTA	CRAIOVA	IASI	TG.MURES	TIMISOARA
TOTAL NO.OF PATIENTS IN ART	2310	1284	160	212	729	465	1162	299	658
% ASSESS FOR CD4	87,88	81,62	85,63	47,64	94,79	83,01	80,72	80,27	75,38
% ASSESS FOR VL	61,69	71,50	59,38	38,21	44,17	32,47	59,90	42,14	36,17

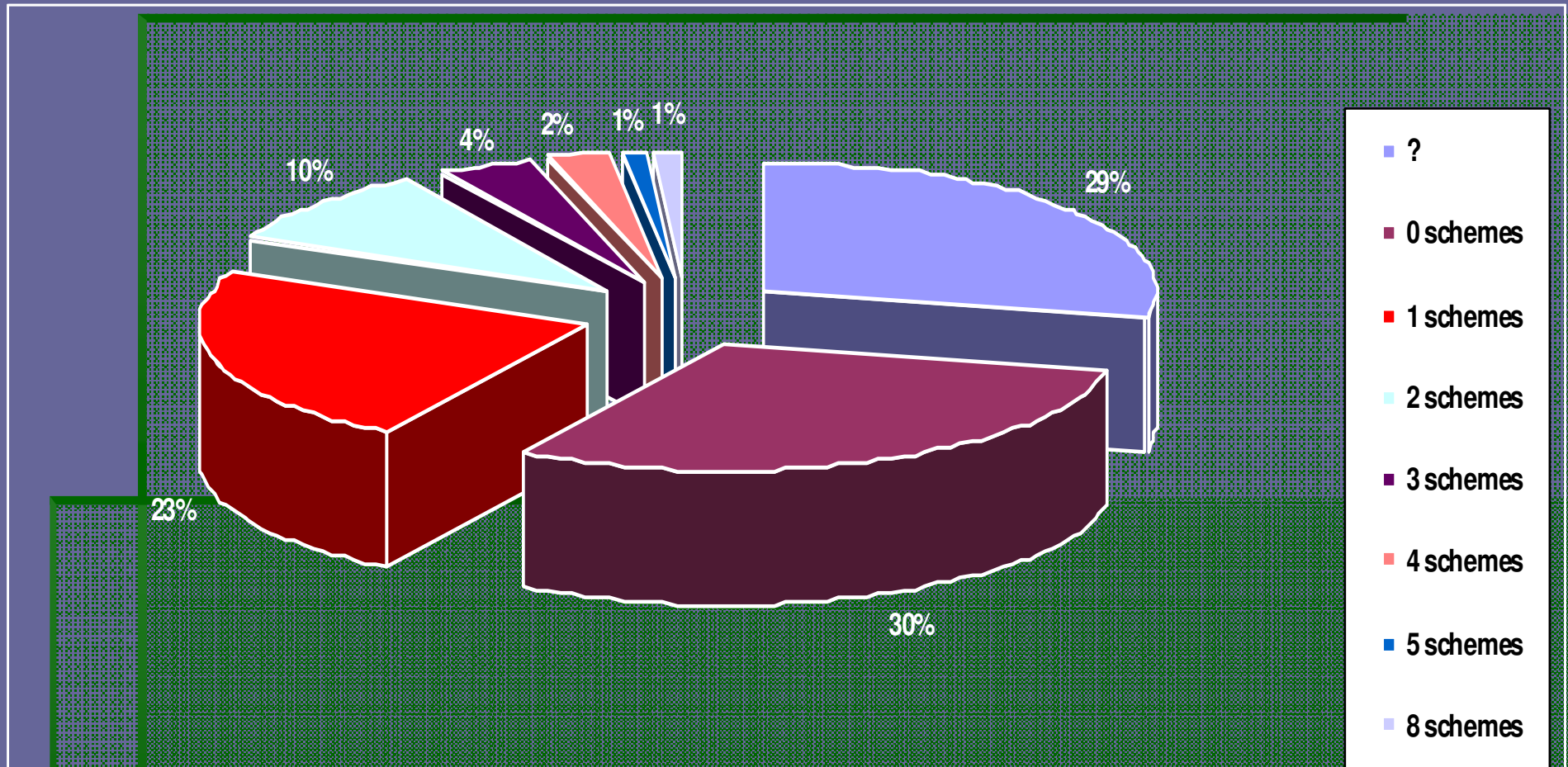
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# ADULTS (≥ 15 YEARS): NUMBER OF ARV SCHEMES, PRIOR TO THE CURRENT ONE NO. OF PATIENTS: 4678/7041

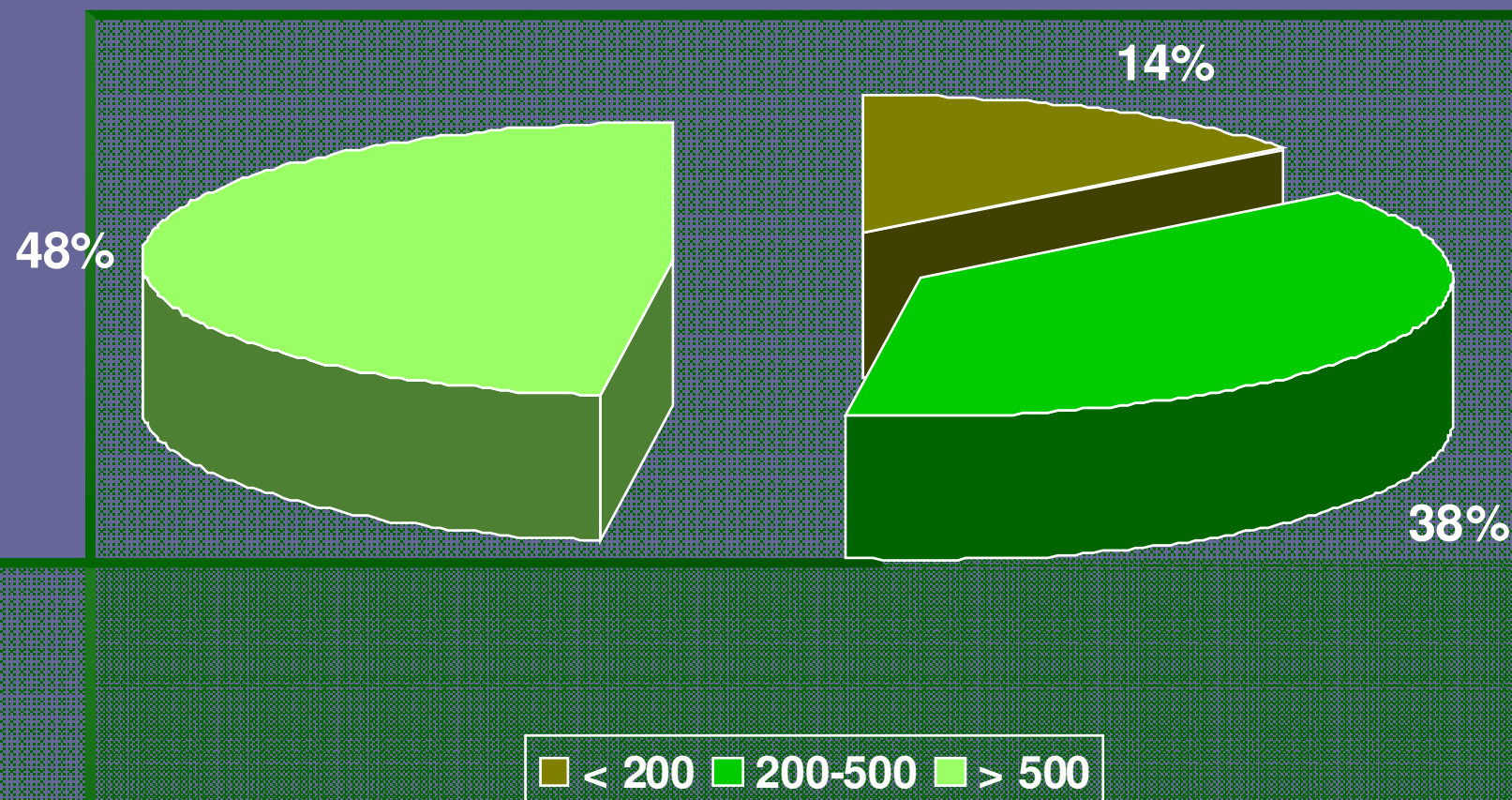


Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# CHILDREN (0-14 YEARS): NUMBER OF ARV SCHEMES, PRIOR TO THE CURRENT ONE

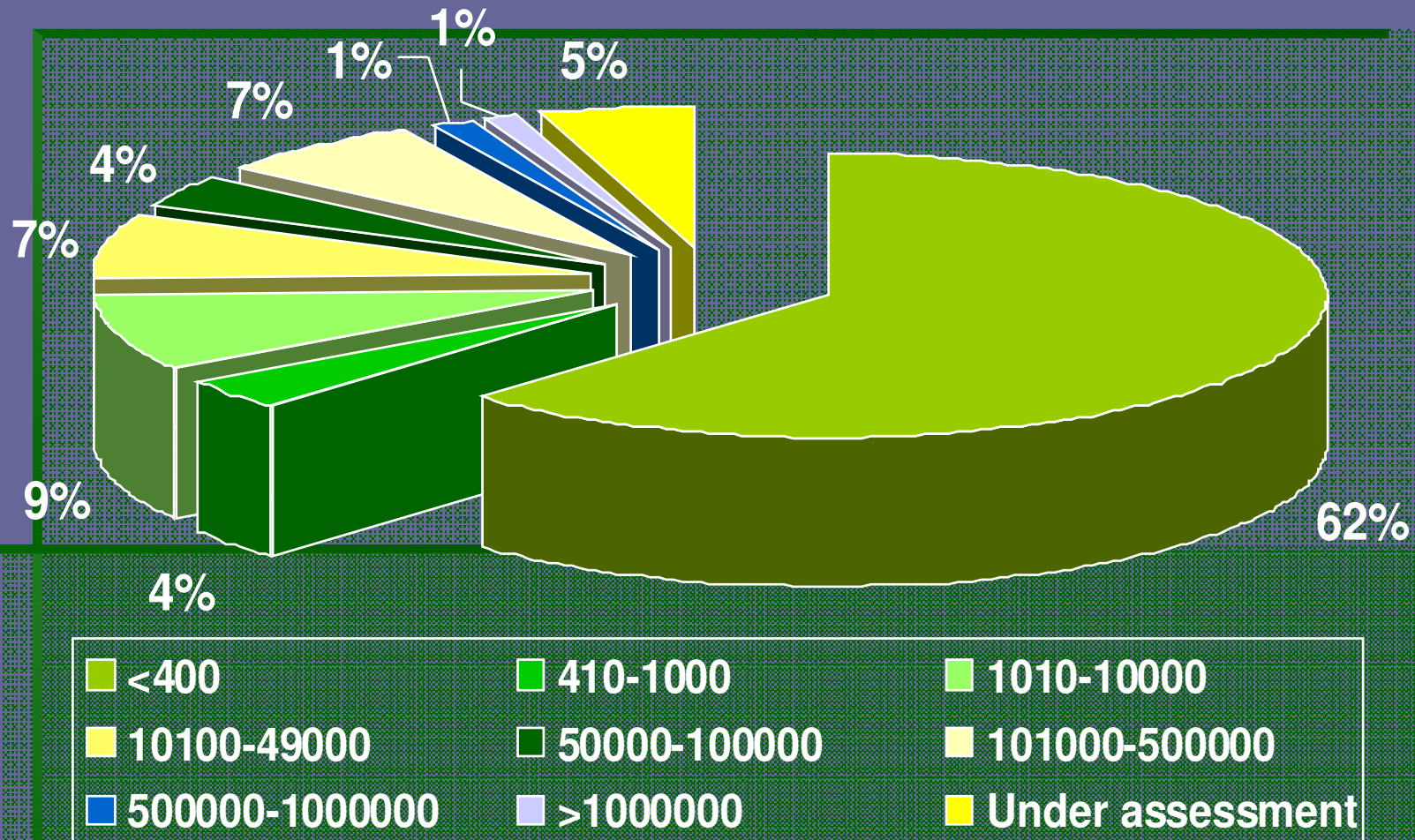


# VALUES OF CD4\* LYMPHOCYTES AT PATIENTS WITH ART (no. cell/mm<sup>3</sup>)



\*85% of patients have been evaluated for CD4 in 2010

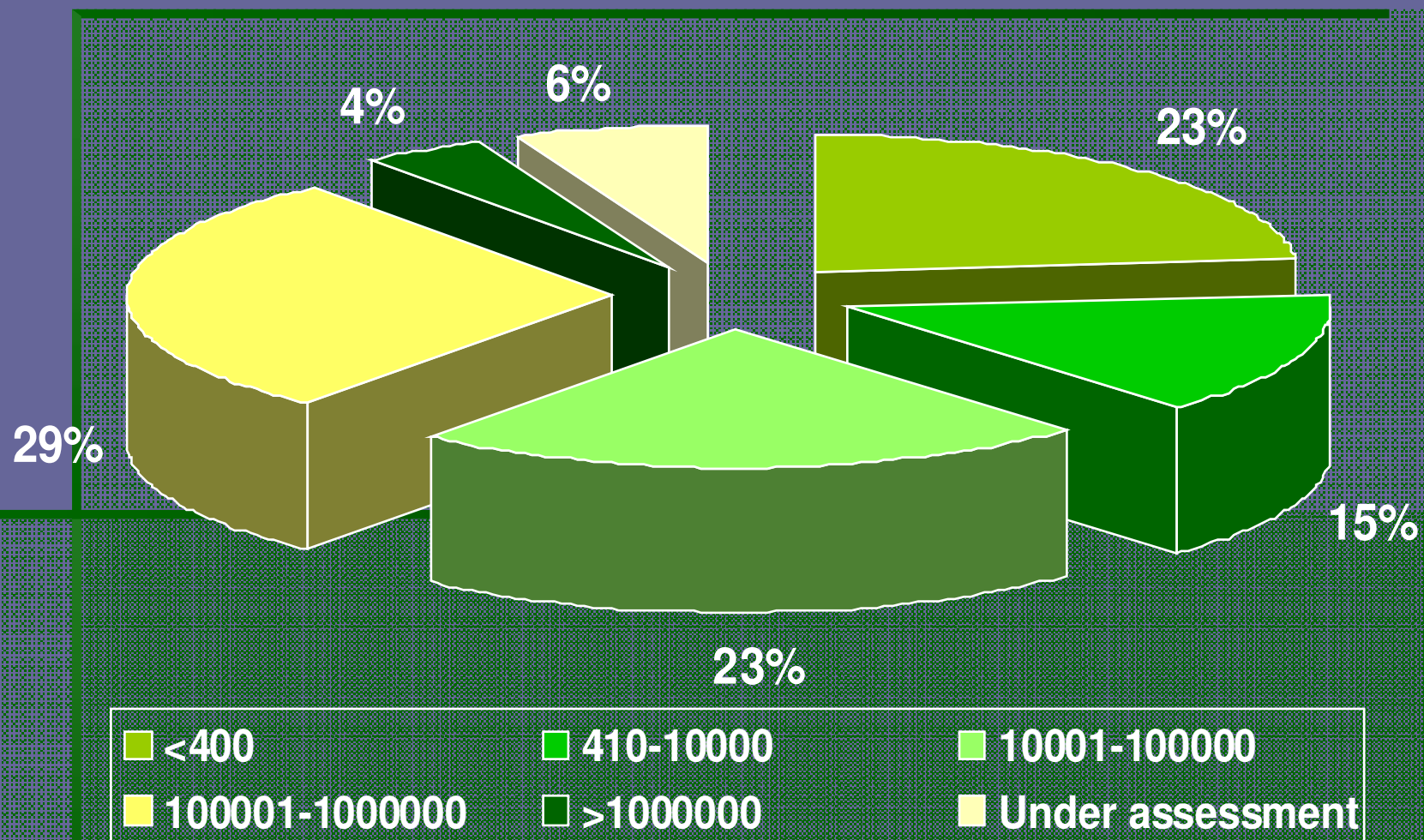
# VL\* VALUES AT PATIENTS WITH ART - no. of copies/ml



\*52% of patients were evaluated for their VL in 2010

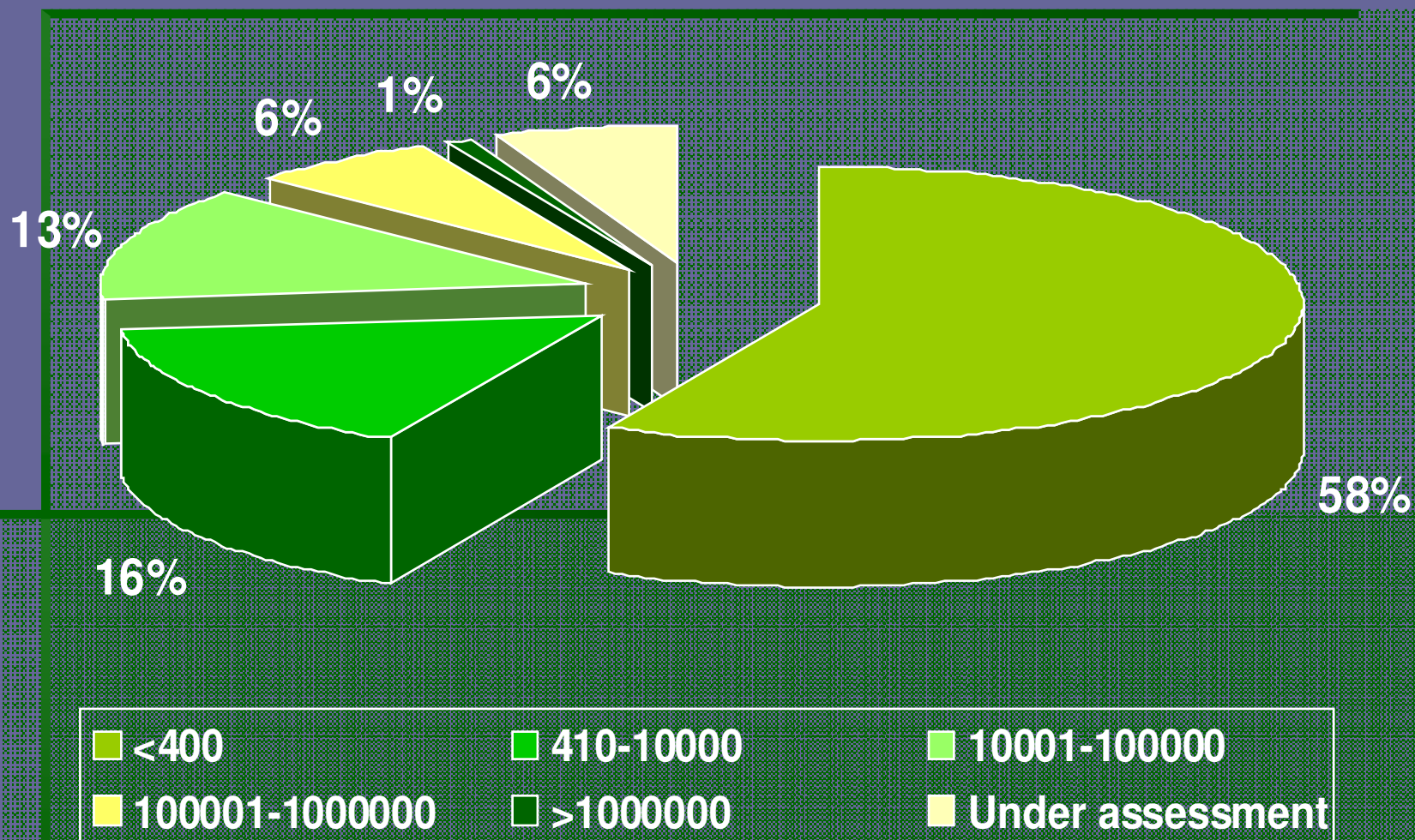
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# VL VALUES AT PATIENTS IN ART WITH CD4 < 200 cel/mm<sup>3</sup>



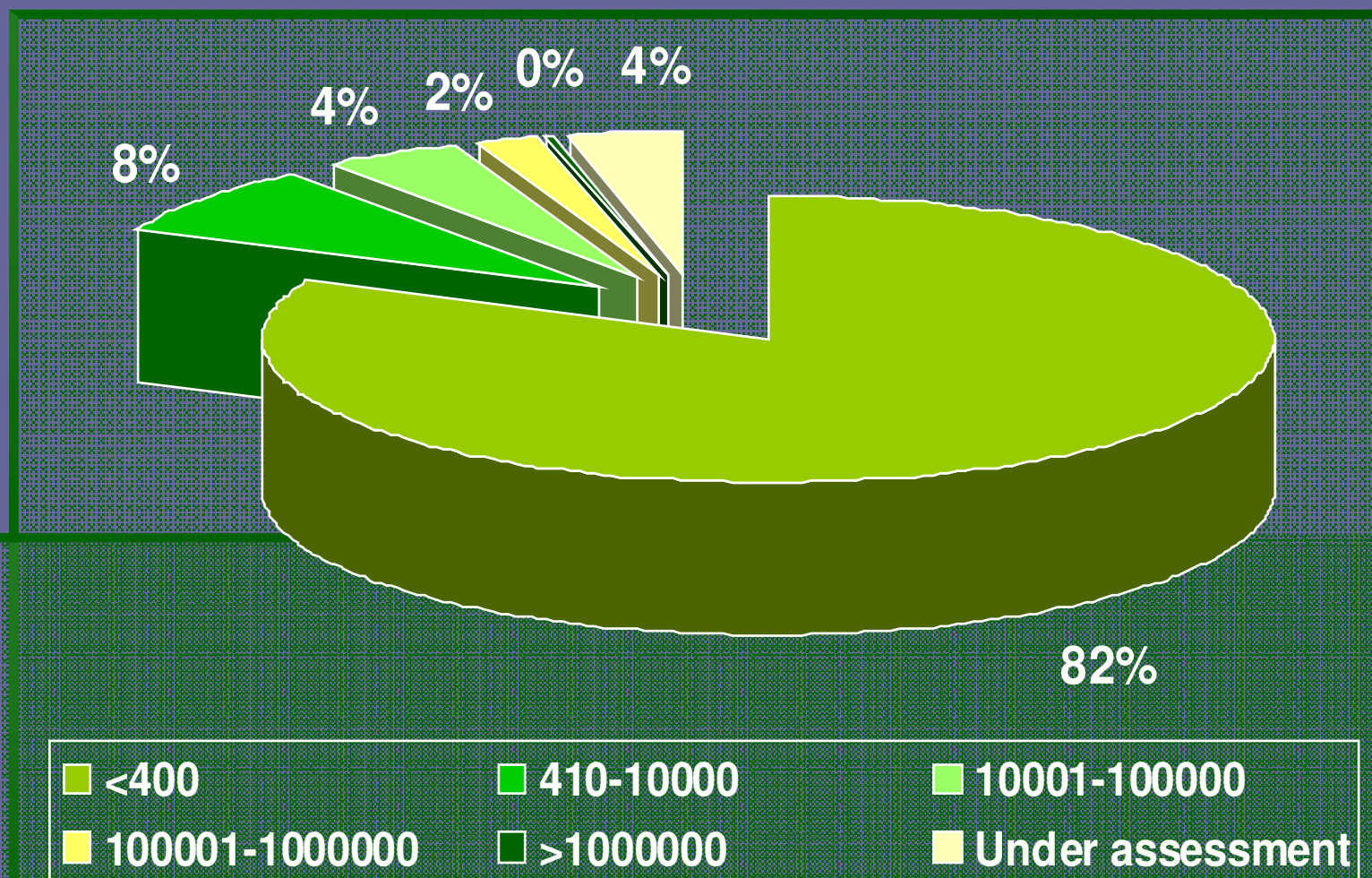
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# VL VALUES AT PATIENTS IN ART WITH CD4 BTW 200-500 cell/mm<sup>3</sup>



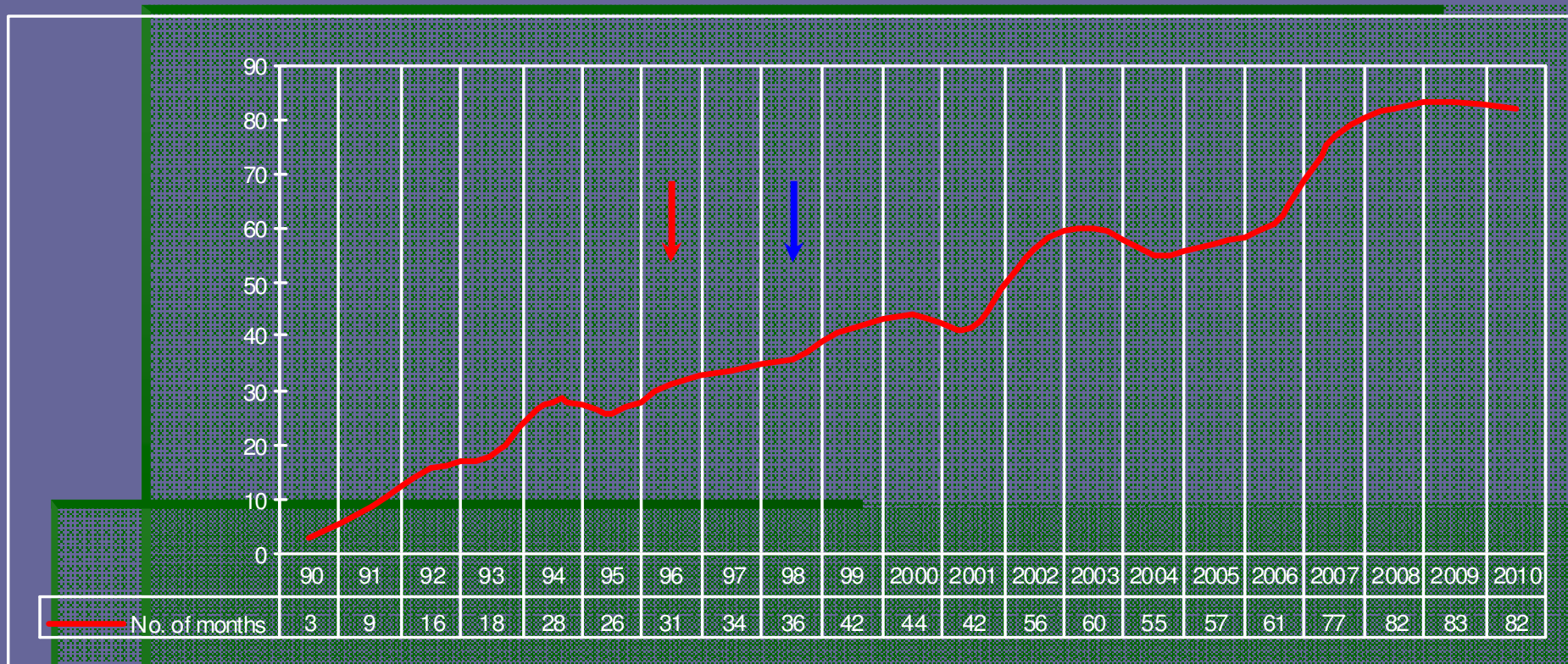
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# VL VALUES AT PATIENTS IN ART WITH CD4 > 500 cell/mm<sup>3</sup>





## AVERAGE SURVIVAL PERIOD (IN MONTHS) OF AIDS PATIENTS , BETWEEN 1990 - 2010

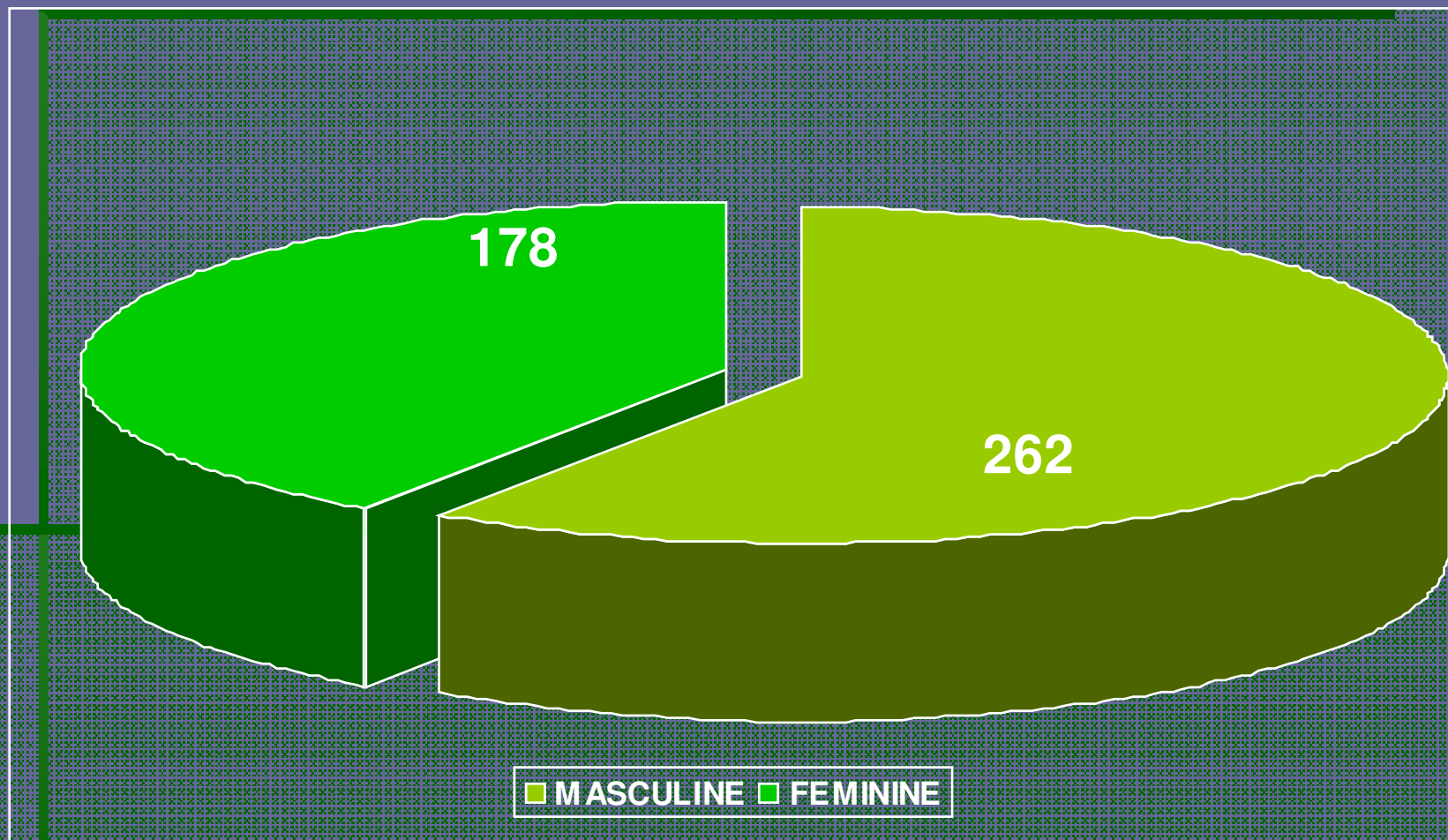


→ Initiation of ART bi therapy

→ Initiation of ART tri therapy

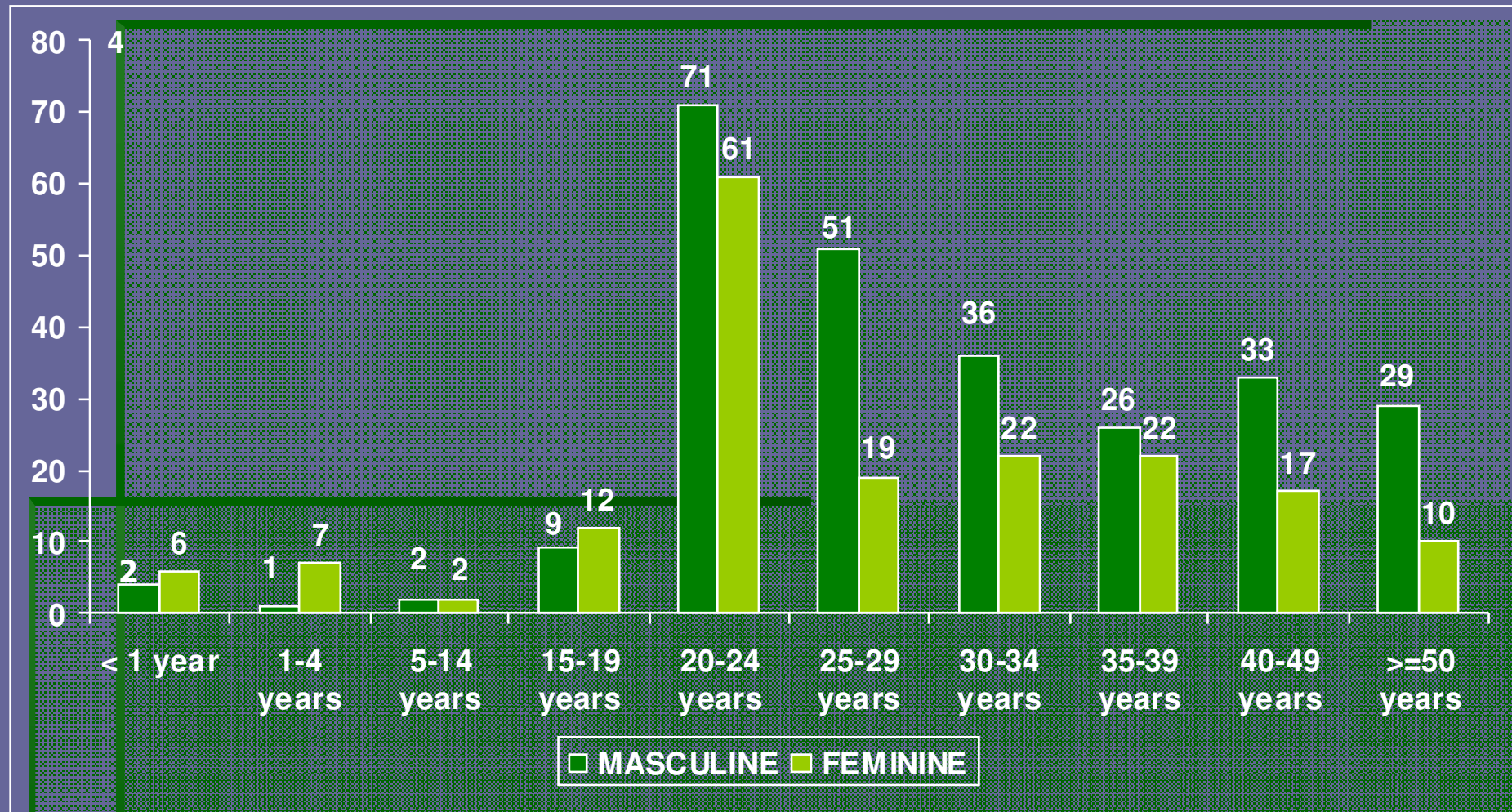


# GENDER DISTRIBUTION OF NEW HIV/AIDS CASES IN 2010



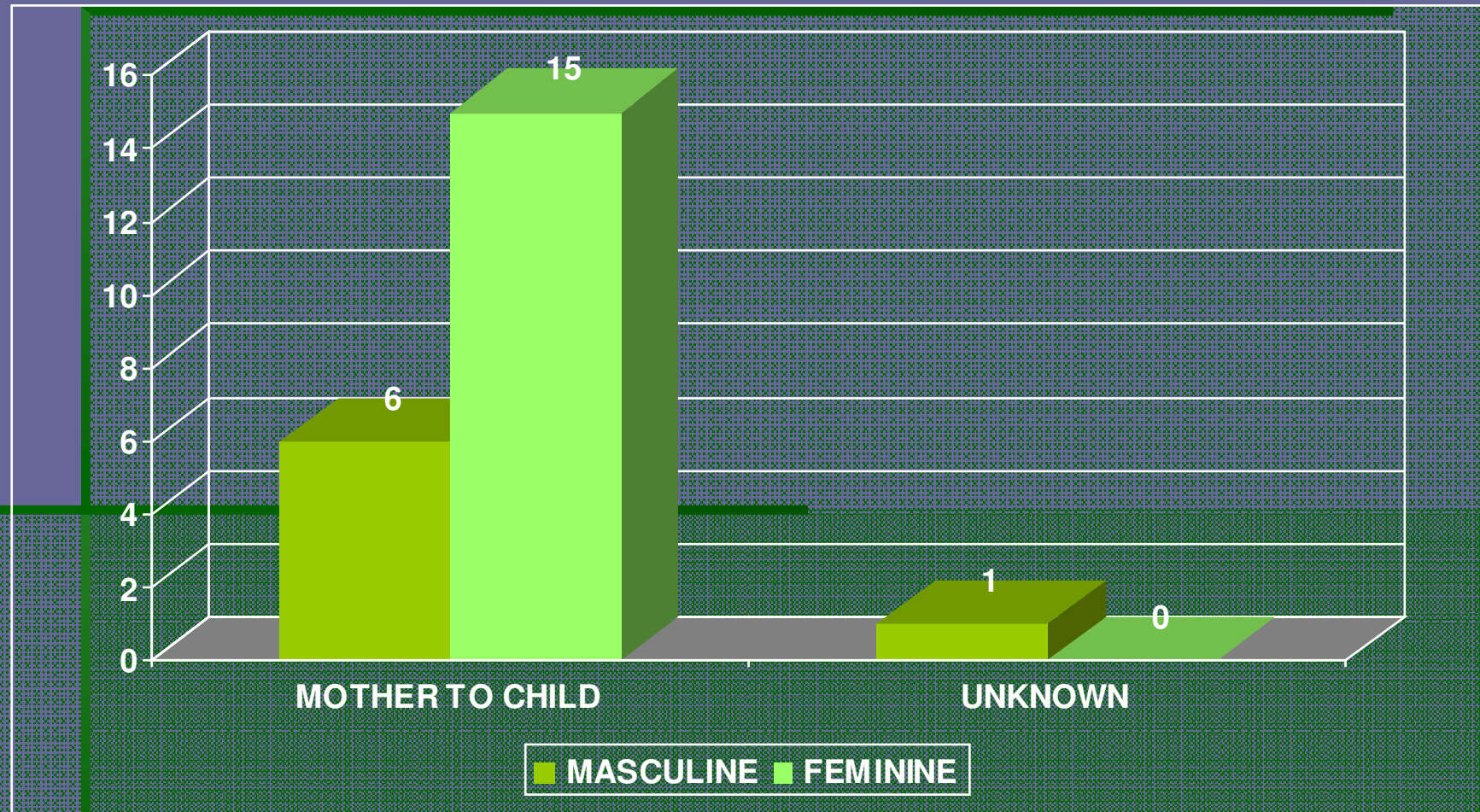
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Balș"

# DISTRIBUTION OF NEW DIAGNOSED HIV/AIDS CASES BY AGE GROUPS AND GENDER IN 2010



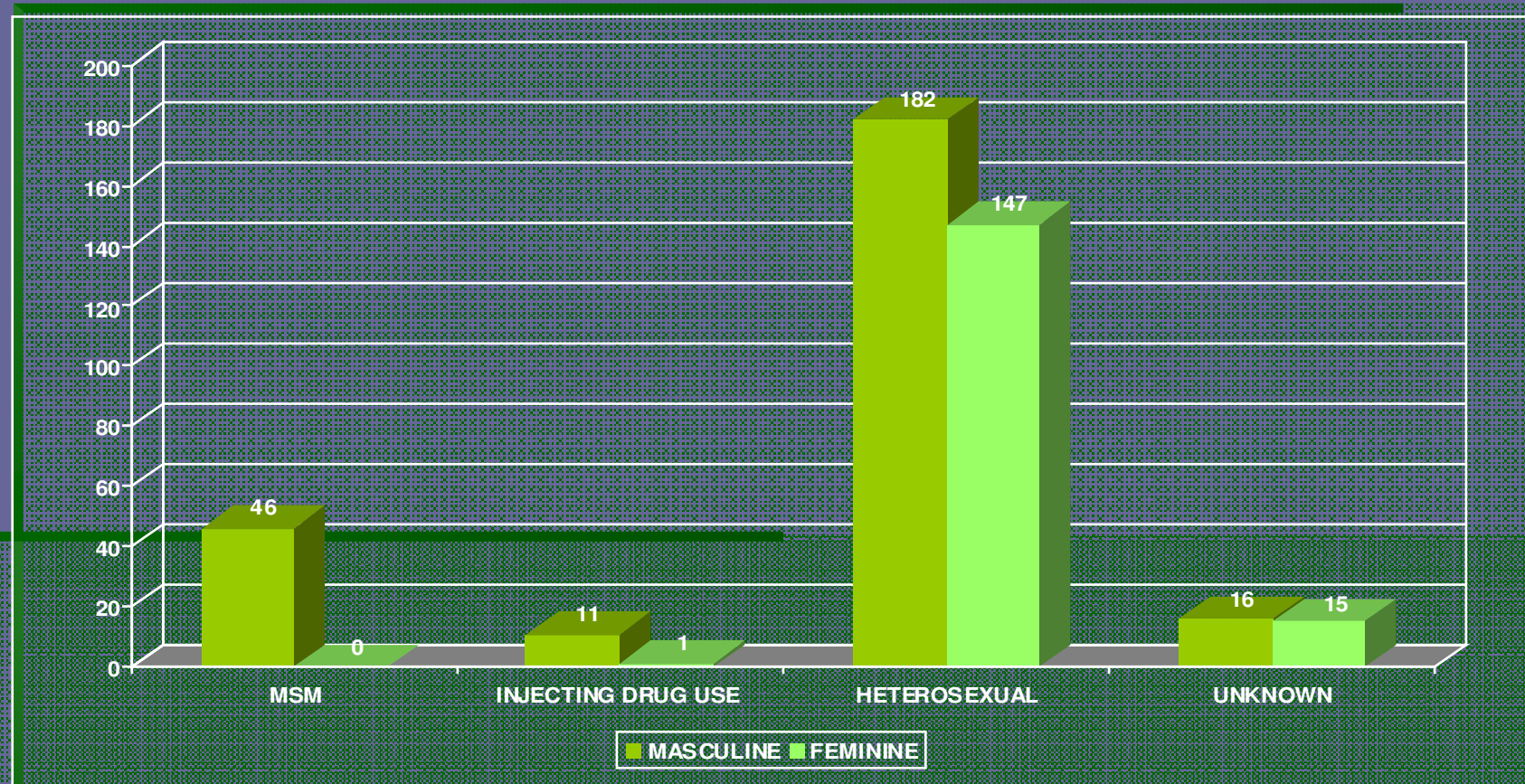
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Balș"

# DISTRIBUTION OF NEW HIV/AIDS CASES AT CHILDREN BY WAY OF TRANSMISSION IN 2010



Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

# DISTRIBUTION OF NEW HIV/AIDS CASES AT ADULTS, BY WAY OF TRANSMISSION IN 2010

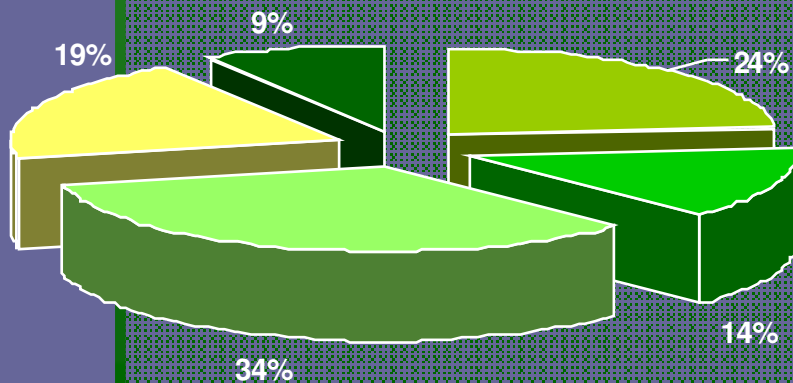


Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

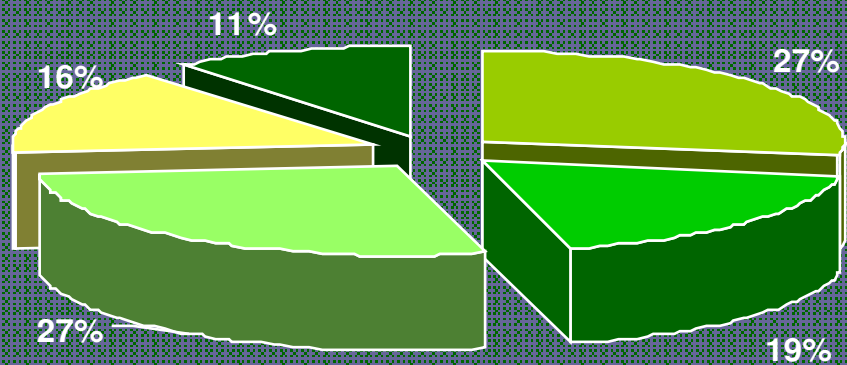
# VALUES OF CD4 LYMPHOCYTES AT ADULTS

## No. cell/mm<sup>3</sup>

### MASCULINE



### FEMININE



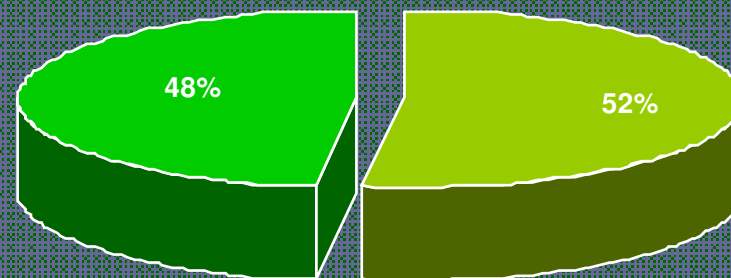
# NUMBER OF NEW CASES AT ADULTS, ASSESSED FOR VL

MASCULINE



■ ASSESSED ■ NOT ASSESSED

FEMININE



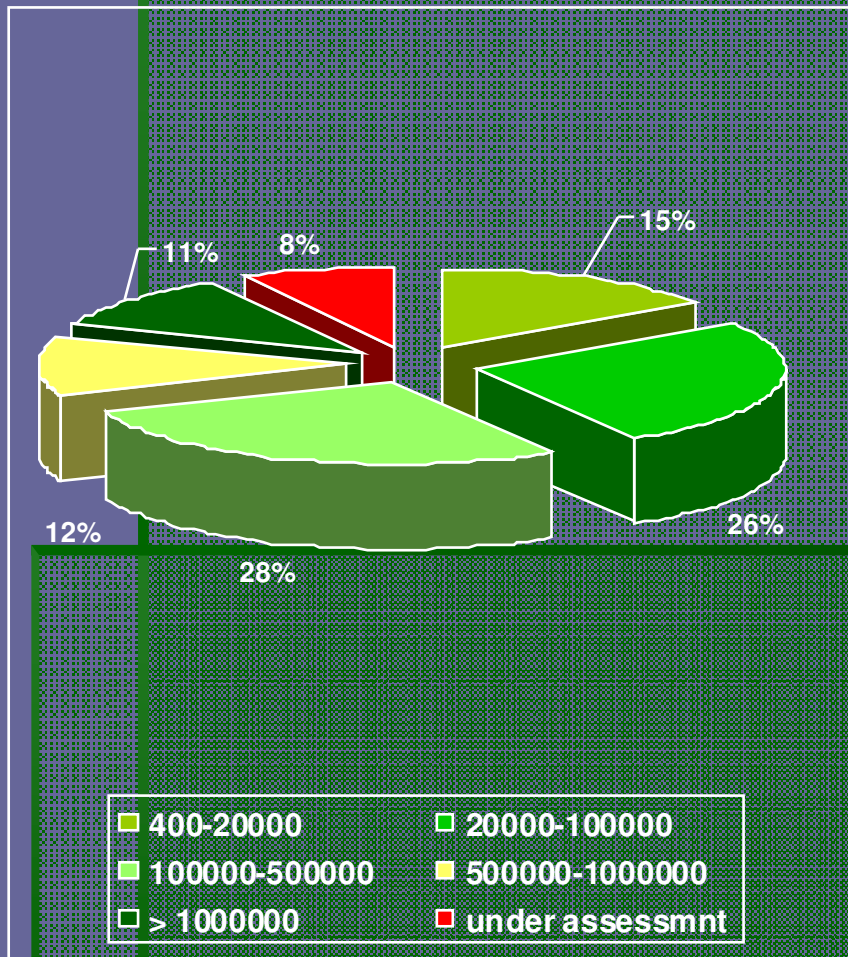
■ ASSESSED ■ NOT ASSESSED



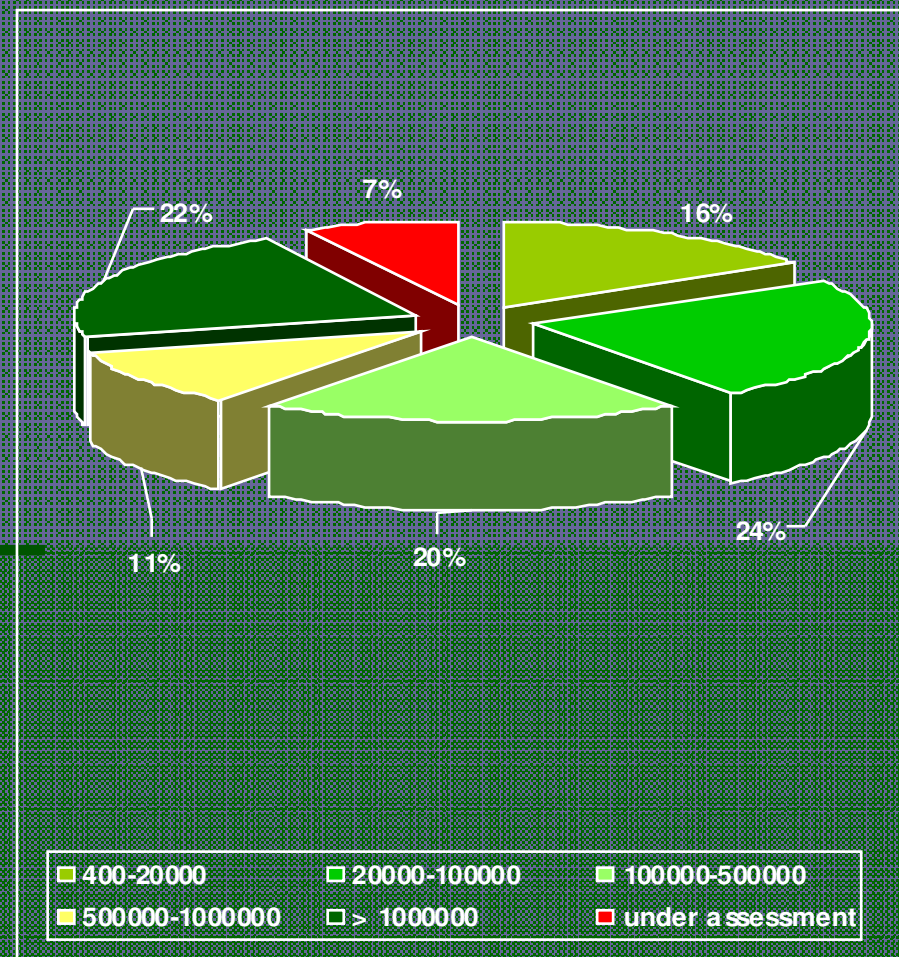
# VL VALUES AT THE NEW CASES - ADULTS

## - No. of copies/ml -

MASCULINE



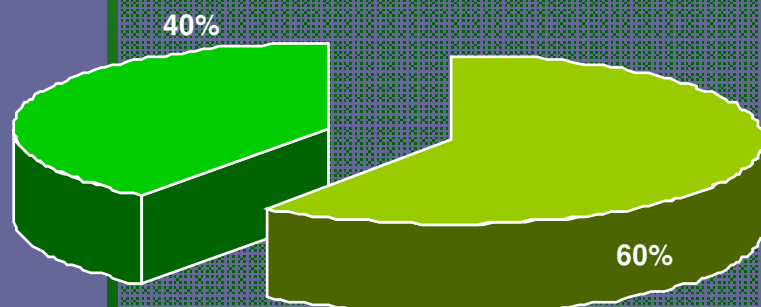
FEMININE



Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

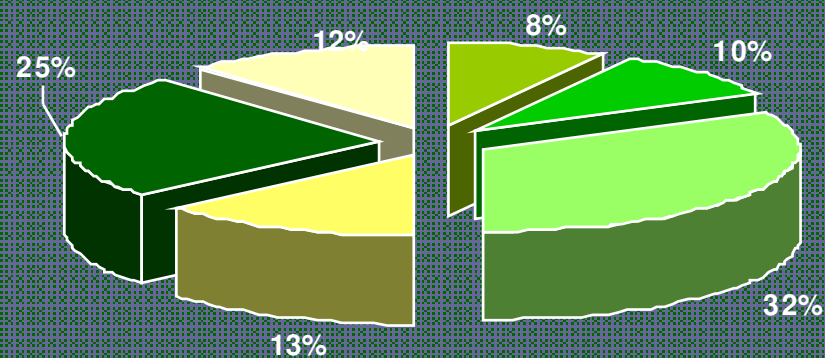
# VL VALUES AT ADULTS WITH CD4 < 200 cell/mm<sup>3</sup>

**TOTAL NO. OF PATIENTS  
WITH CD4 < 200 cel/mmc: 210**



■ ASSESSED ■ NOT ASSESSED

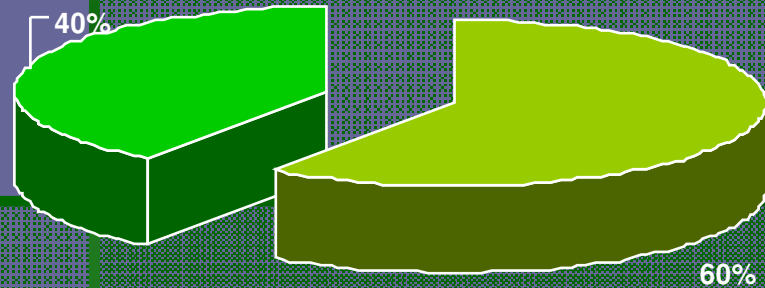
**VL VALUES (No. of assessed  
patients: 126)**



■ 400-20000 ■ 10000-100000  
 ■ 100000-500000 ■ 500000-1000000  
 ■ > 1000000 ■ Under assessment

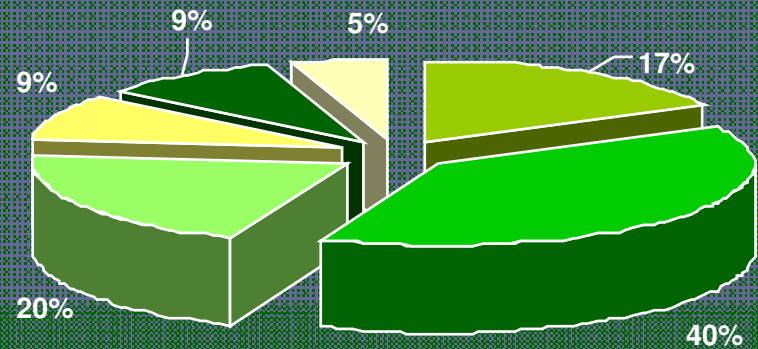
# VL VALUES AT ADULTS WITH CD4 COUNTS BTW. 200-500 cell/mm<sup>3</sup>

**TOTAL NO. OF PATIENTS**  
**CD4: 200-500 cell/mmc: 164**



■ assessed for vl ■ no vl

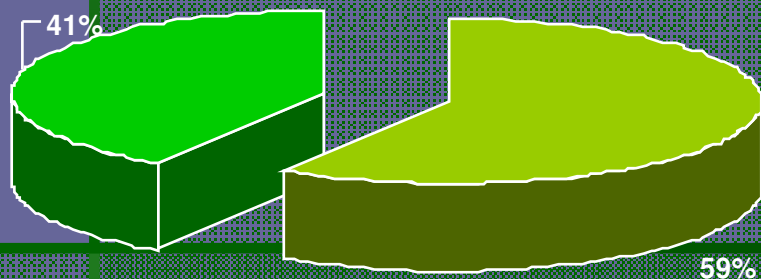
**VL VALUES (No. of assessed patients: 98)**



■ 400-20000 ■ 20000-100000  
 ■ 100000-500000 ■ 500000-1000000  
 ■ >1000000 ■ under assessment

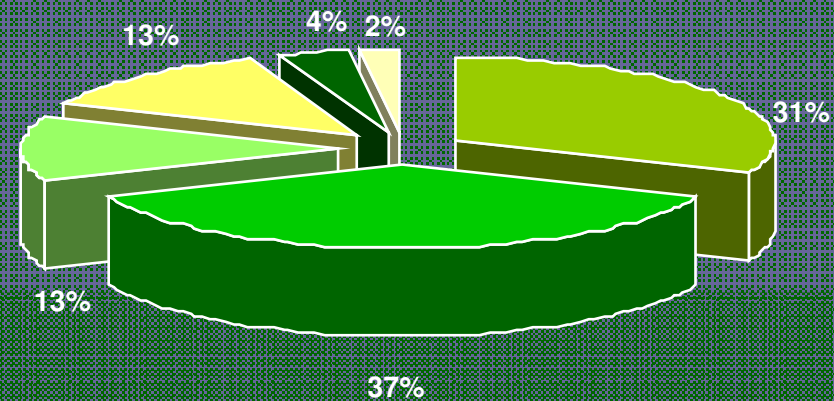
# VL VALUES AT ADULTS WITH CD4 > 500 cell/mm<sup>3</sup>

TOTAL NO. OF PATIENTS WITH  
CD4 > 500 ce/mm<sup>3</sup>: 95



■ ASSESSED ■ NO VL

VL VALUES (NO. OF ASSESSED  
PATIENTS: 56)



■ 400-20000 ■ 20000-100000  
 ■ 100000-500000 ■ 500000-1000000  
 ■ >1000000 ■ UNDER ASSESSMENT

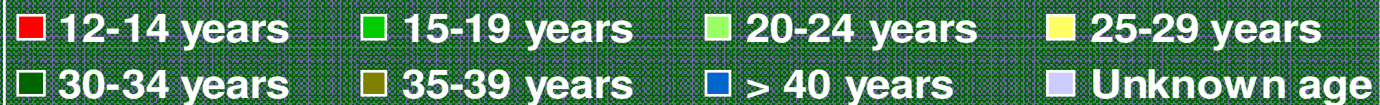
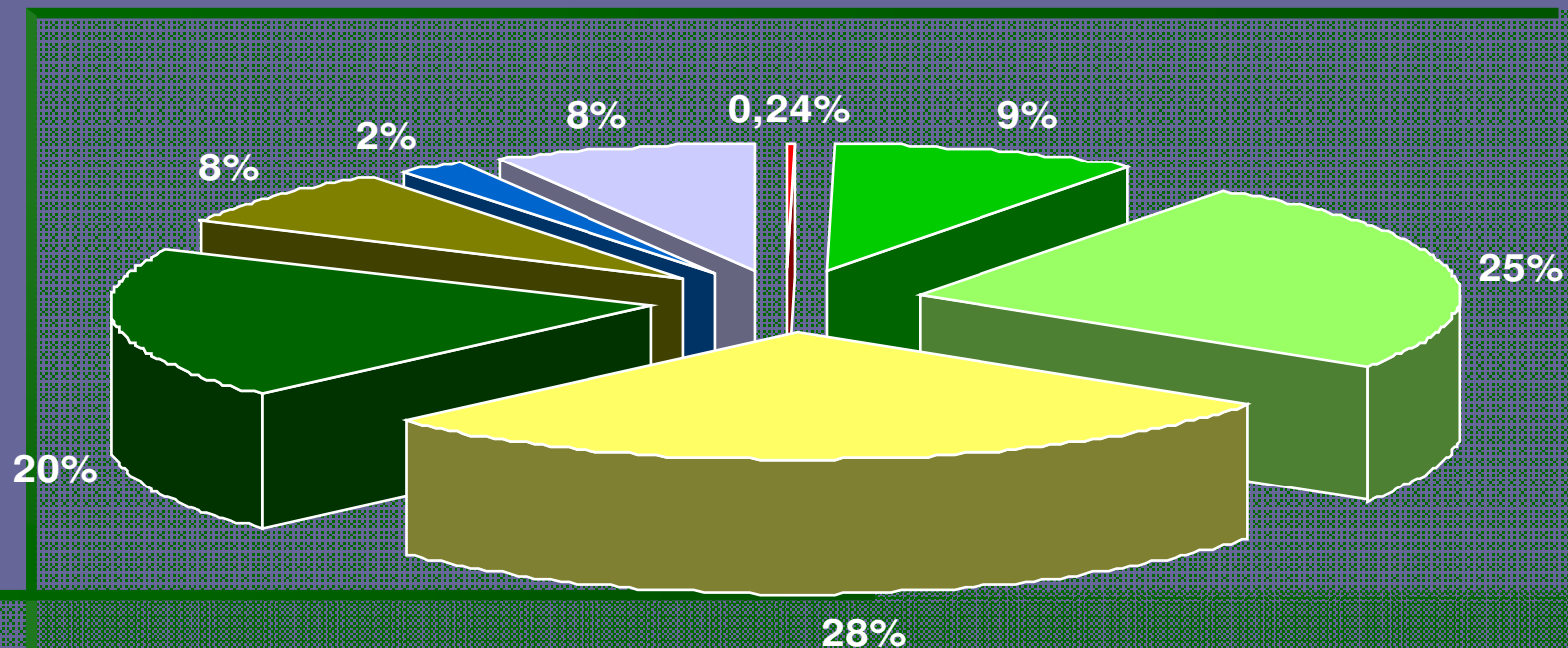
## HIV TESTS\* BY RISK GROUPS IN 2010

Risk group	Negative tests	Positive tests	TOTAL	%POZITIVE
STI	3992	27	4019	0,67
TBC	13323	128	13451	0,95
<b>MATERNITY</b>	<b>547</b>	<b>47</b>	<b>594</b>	<b>7,91</b>
PREGNANT WOMEN	110920	117	111037	0,11
MEDICAL STAFF	10016	0	10016	0,00
HEMODIALYSIS	2380	0	2380	0,00
TRANSFUSION RECEPIENT	194	0	194	0,00
PRENUPTIAL CHECK-UP	6018	7	6025	0,12
IV DRUG USERS	96	1	97	1,03
INMATES	58	7	65	10,77
MSM	47	4	51	7,84
SEX WORKERS	89	0	89	0,00
HIV CONTACTS	898	78	976	7,99
<b>SALORS</b>	<b>4556</b>	<b>4</b>	<b>4560</b>	<b>0,09</b>
DRIVERS	15	0	15	0,00
WORK ABROAD > 6 MONTHS	348	3	351	0,85
STAY ABROAD > 6 MONTHS	31	0	31	0,00
REQUEST	116427	918	117345	0,78
OCCASIONAL	19623	996	20619	4,83
<b>TOTAL</b>	<b>289578</b>	<b>2337</b>	<b>291915</b>	<b>0,80</b>

\* The data is received from County Public Health Authorities

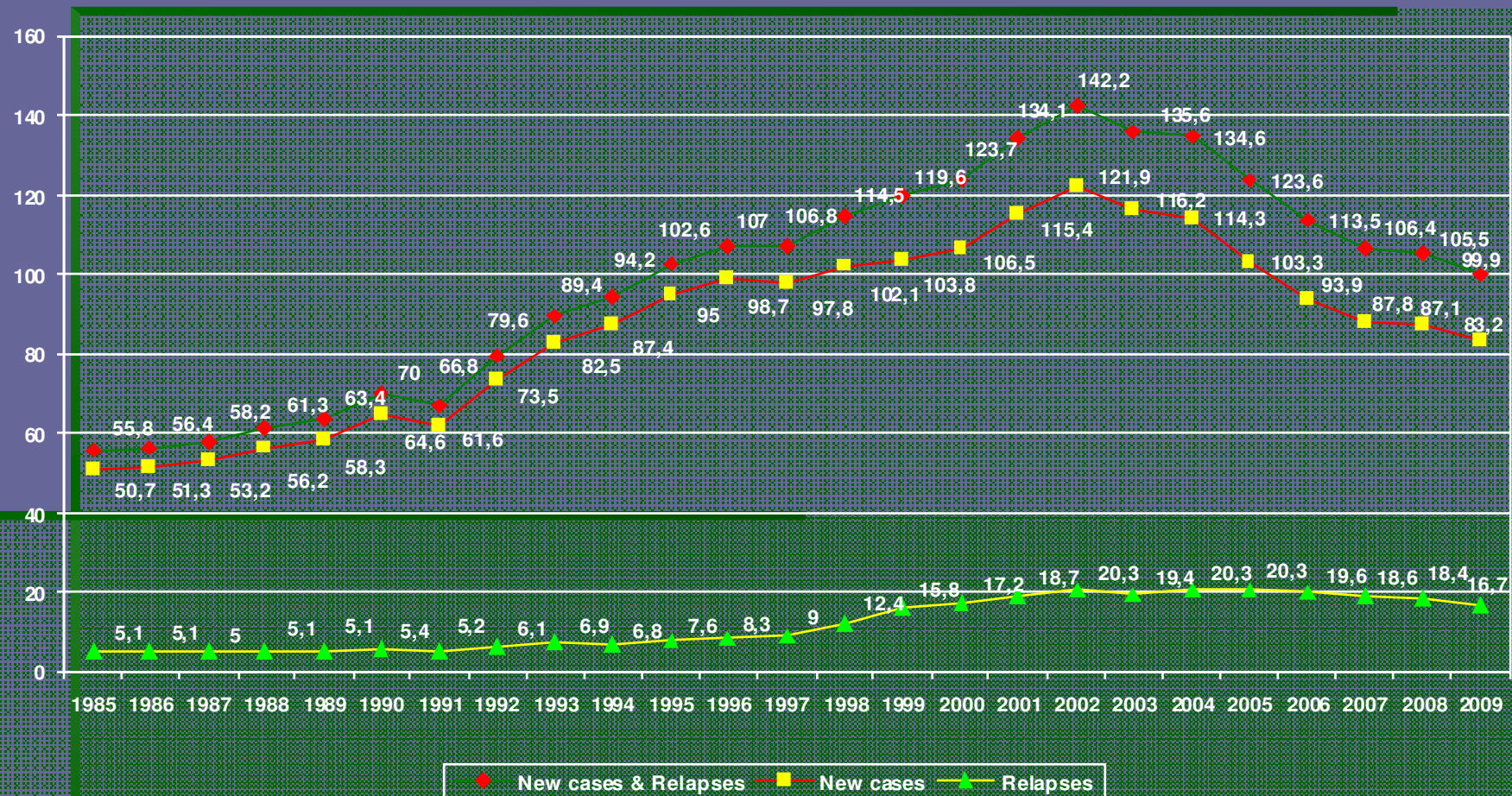
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Balş"

# HIV TESTINGS\* AT PREGNANT WOMEN BY AGE GROUPS IN 2010



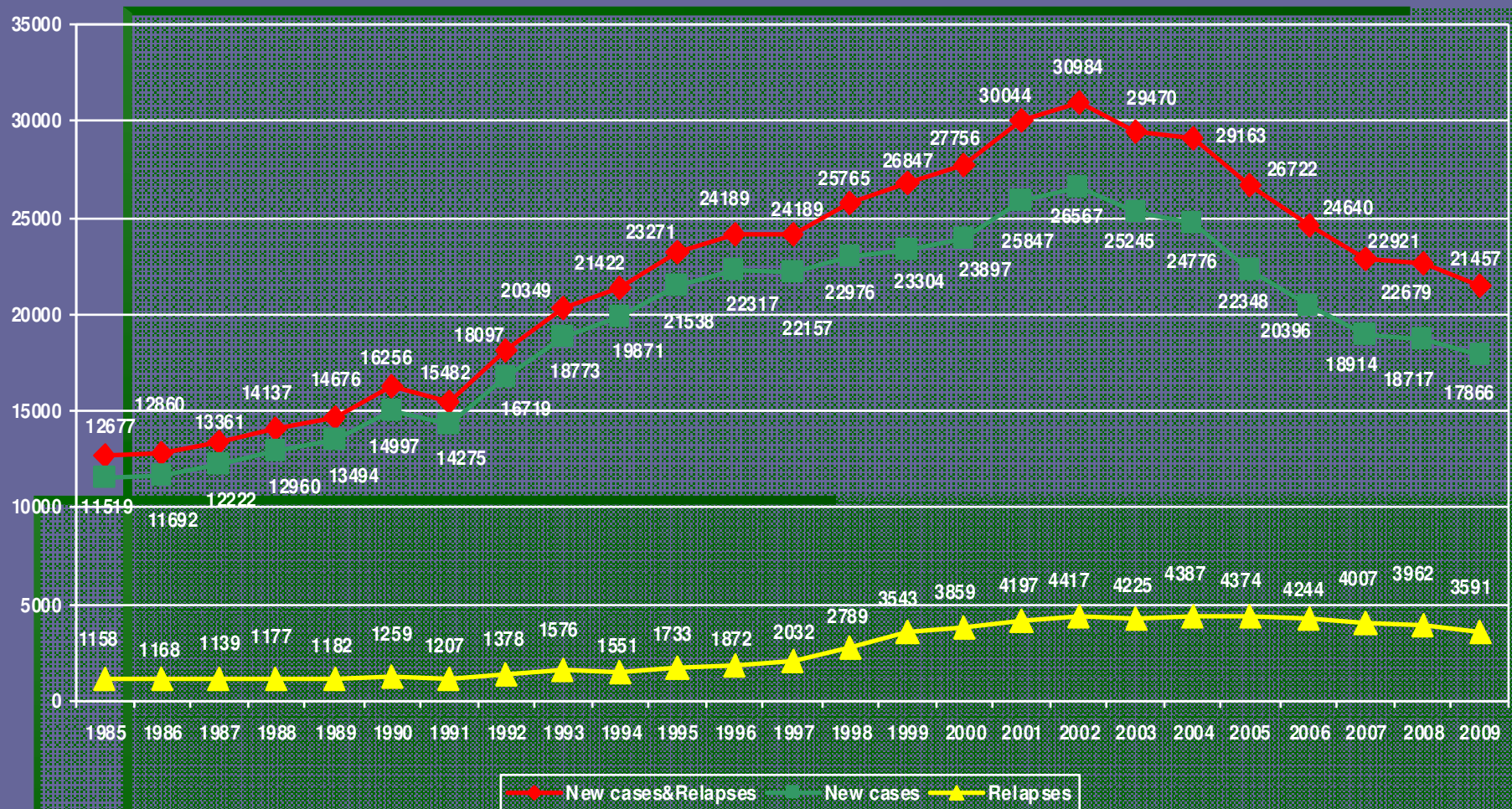
Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Balș"

# TB global incidence in Romania 1985-2009



Source: National Institute of Pneumoftiziologie *Marius Nasta*, Bucharest

# Number of TB new cases and relapses, 1985-2009



Source: National Institute of Pneumoftiziology *Marius Nasta*, Bucharest



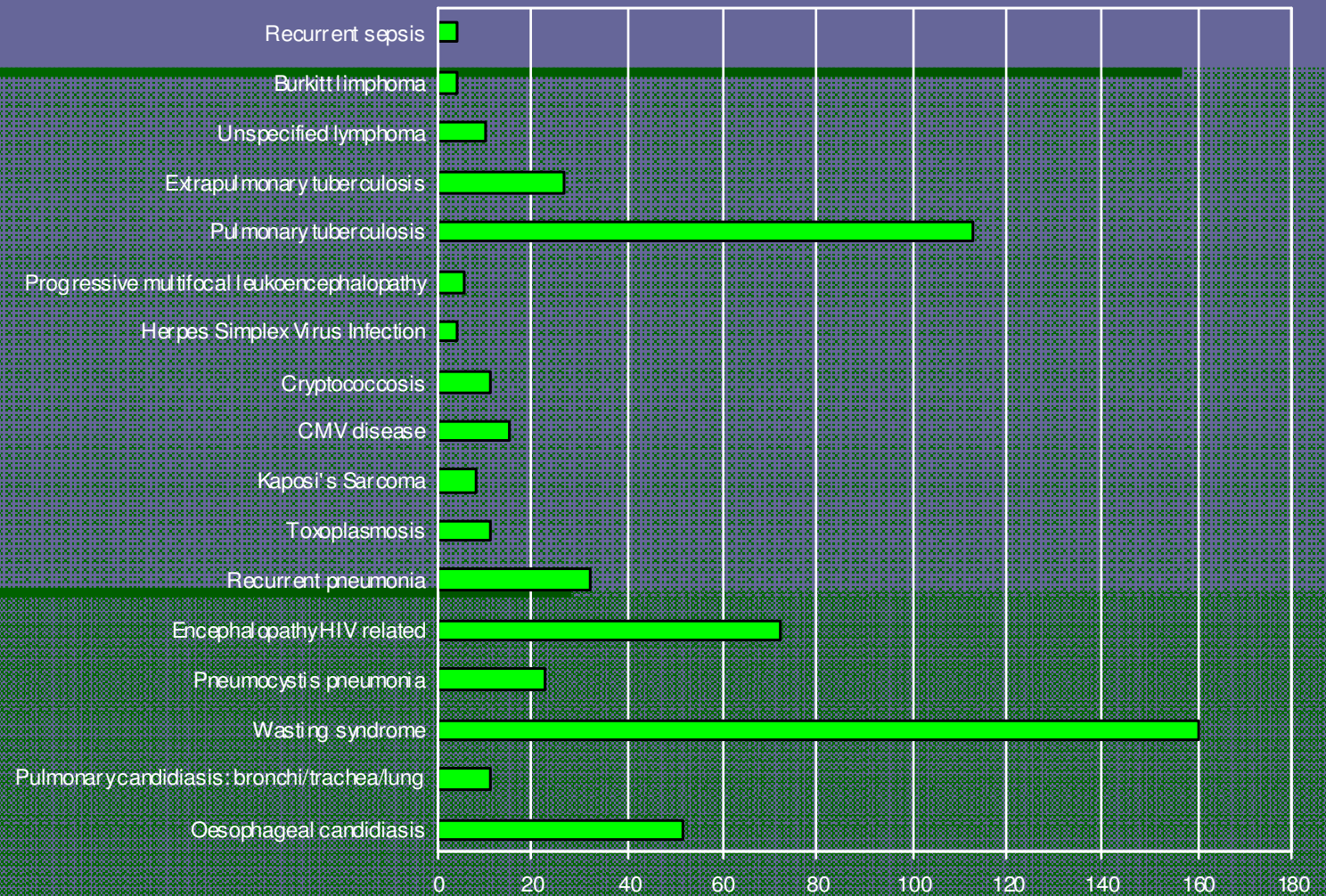
# HIV-TB association

- **Current situation :**

- In 2009 **142** cases of HIV-TB co-infection were registered, out of which **78** at the new AIDS cases (**2** children and **76** adults).

- In 2010 **178** cases of HIV-TB co-infection were registered, out of which **66** at the new AIDS cases (**1** child and **65** adults).

# AIDS INDICATIVE DISEASES IN 2010



Source: Compartment for Monitoring and Evaluation of HIV/AIDS Infection in Romania INBI "Prof.Dr.M.Bals"

The data is collected from the HIV/AIDS confirmation charts, sent by the nine Regional Centers for Evaluation and Monitoring of HIV/AIDS Data and further processed and elaborated by Compartment for Monitoring and Evaluation of HIV/AIDS data in Romania, in National Infectious Diseases Institute–Bucharest.

The immunologic and virologic data represent the joint effort of laboratories in the nine Regional Centers in collaboration with Compartment for Monitoring and Evaluation of HIV/AIDS data in Romania, in National Infectious Diseases Institute–Bucharest.



# NATIONAL INSTITUTE OF INFECTIOUS DISEASES “PROF.DR.MATEI BALȘ”

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