



ARROW
2015

Assessment of Resources and Research
Opportunities in **NeuroAIDS**

**Assessment of Resources
and Research Opportunities
in **Neuro AIDS****

Bucharest
5-6 October 2015

30 years of HIV experience in Romania

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Bucharest,
5th October 2015,
Novotel Hotel

UNAIDS objectives



Fast-Track Targets

by 2020

90-90-90

Treatment

500 000

New infections among adults

ZERO

Discrimination

by 2030

95-95-95

Treatment

200 000

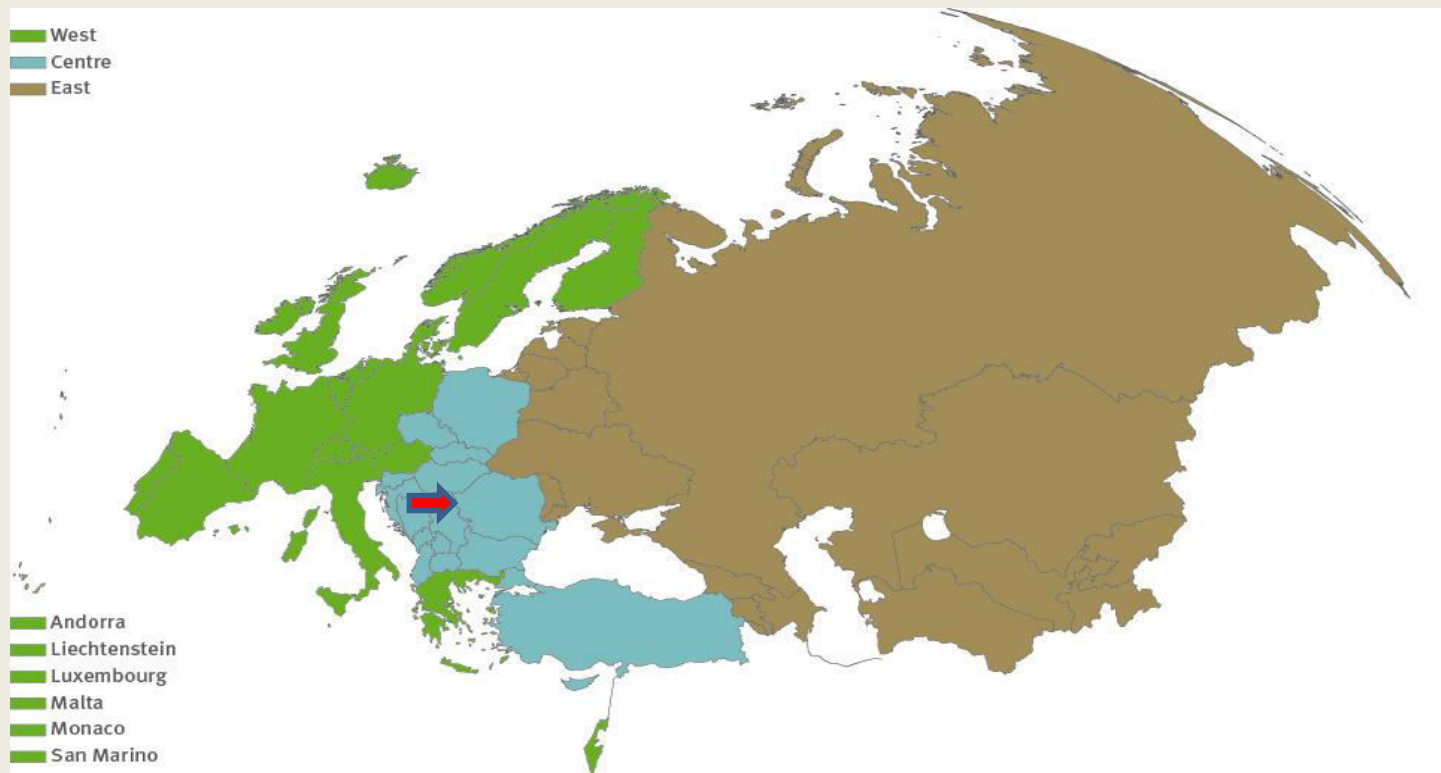
New infections among adults

ZERO

Discrimination

Europe 2013

Geographical/epidemiological division of the WHO European Region



Characteristics of HIV diagnoses reported in the WHO European Region, the EU/EEA, and by geographical area, 2013

Geographical areas	WHO European Region*	West	Centre	East*
Reporting countries/Number of countries	50/53 (51/53)	23/23	15/15	13/15 (14/15)
Number of HIV diagnoses	56 507 (136 235)	26 847	4166	25 494 (105 222)
Rate per 100 000 population	7.8 (15.7)	6.3	2.2	22.7 (41.2)
Percentage age 15-24 years	10.2%	10.3%	14.4%	9.5%
Male-to-female ratio	2.2 (1.7)	3.3	4.9	1.3 (1.4)
Transmission mode				
Men who have sex with men	23.6% (10.1%)	43.1%	30.1%	2% (0.8%)
Heterosexual	46.1% (30.6%)	33.6%	24.8%	62.7% (30.0%)
Injecting drug use	16.2% (21.3%)	4.1%	5.9%	30.6% (26.3%)
Mother to child transmission	0.9% (0.6%)	0.7%	1.1%	1.1% (0.6%)
Unknown	13% (37.3%)	18.2%	37.9%	3.6% (42.2%)

data received from Lichtenstein, Turkmenistan or Uzbekistan.

*Figures including Russia are presented for the WHO Region and East in (brackets)

From Dublin to Rome: 10 years of responding to HIV in Europe and Central Asia

Figure 2. CD4 threshold for initiating ART

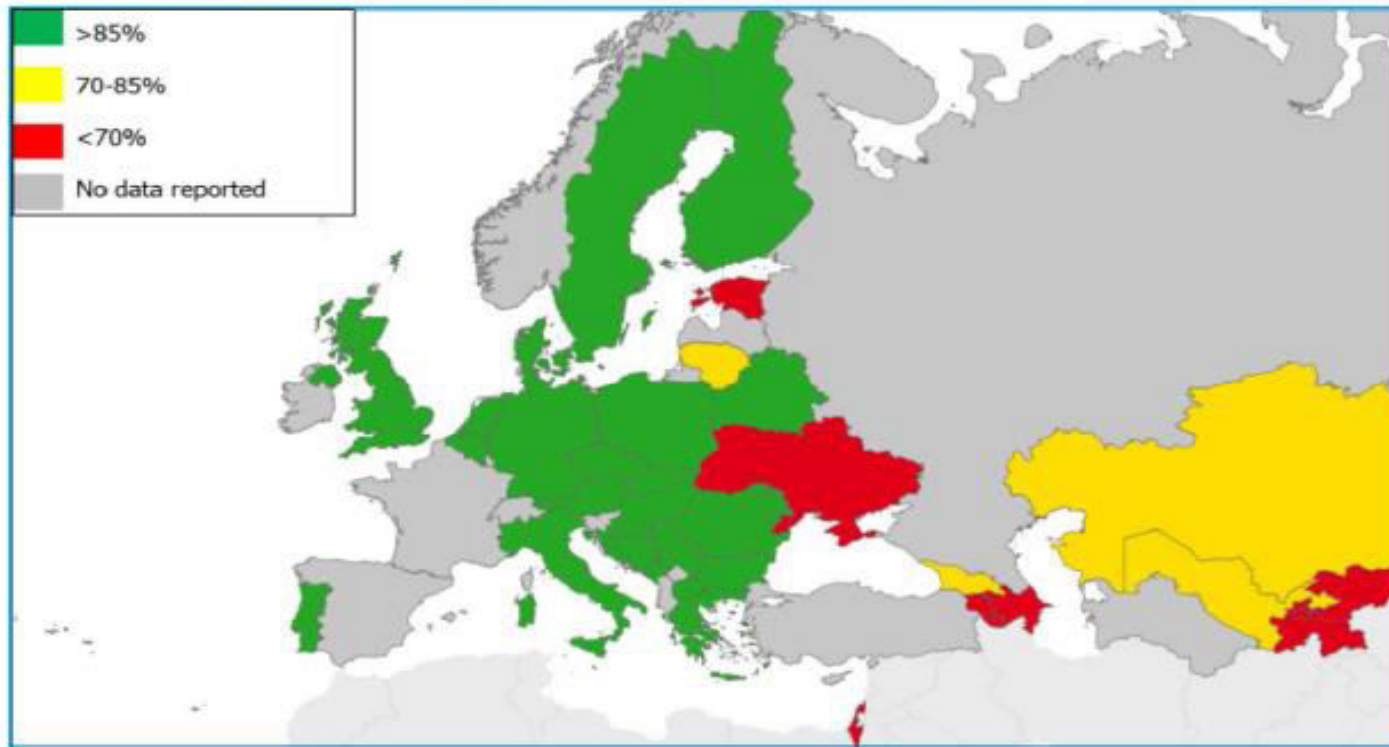
500 cells/mm³	18 Austria, Belgium, Bosnia and Herzegovina, Czech Republic, Estonia, Finland, France, Georgia, Iceland, Israel, Malta, Netherlands, Poland, Romania, Slovakia, Spain, Sweden, Turkey
350 cells/mm³	29 Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Cyprus, Denmark, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Kosovo, Kyrgyzstan, Lithuania, Luxembourg, Moldova, Montenegro, Norway, Portugal, Serbia, Slovenia, Switzerland, Tajikistan, Ukraine, United Kingdom, Uzbekistan
200 cells/mm³	1 Latvia
No data reported	7 Andorra, The former Yugoslav Republic of Macedonia, Liechtenstein, Monaco, Russia, San Marino, Turkmenistan

Source:

<http://www.ecdc.europa.eu/en/publications/Publications/dublin-rome-10-years-hiv-europe-central-asia.pdf>

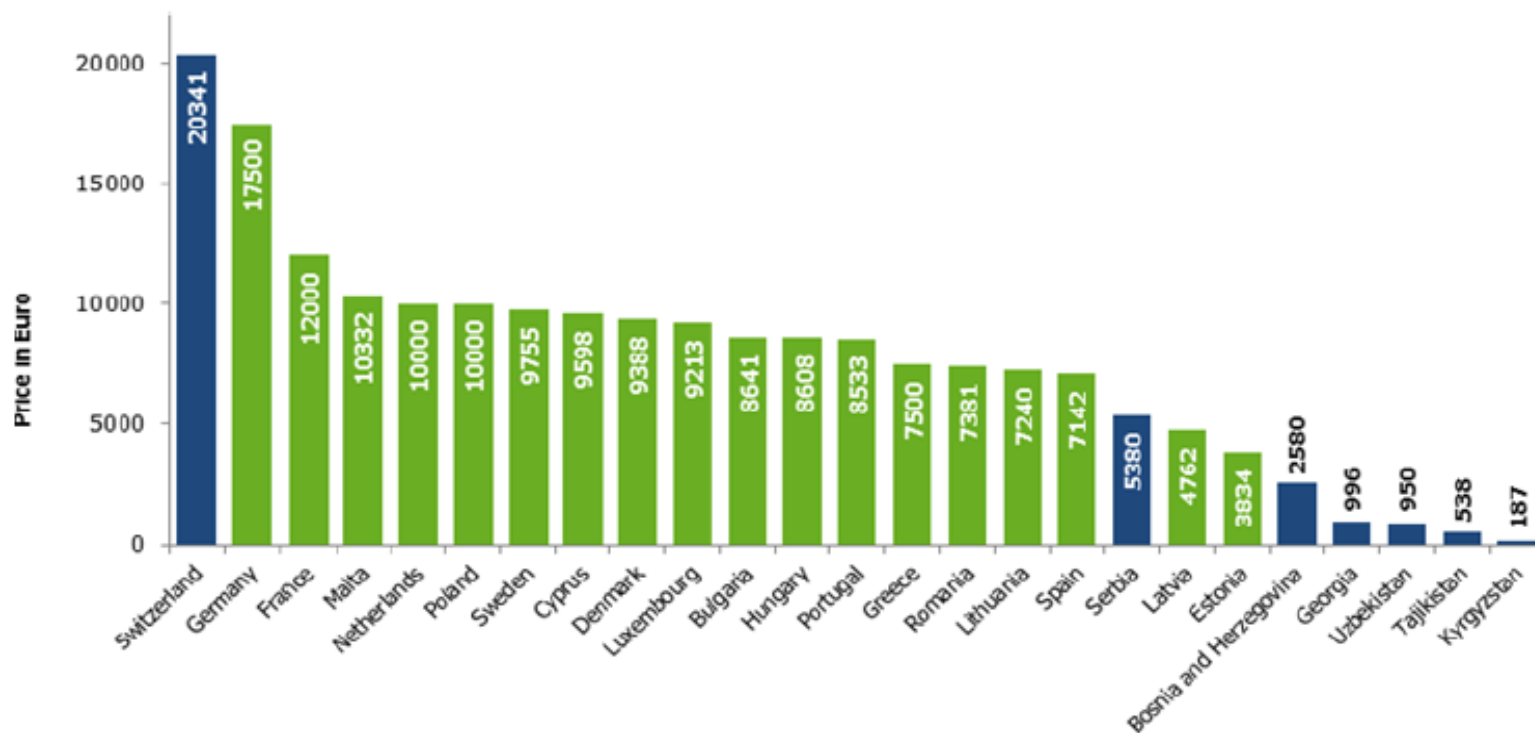
From Dublin to Rome: 10 years of responding to HIV in Europe and Central Asia

Figure 10. Proportion of PLHIV⁵ eligible for treatment and receiving it⁶ (2010–2013)



From Dublin to Rome: 10 years of responding to HIV in Europe and Central Asia

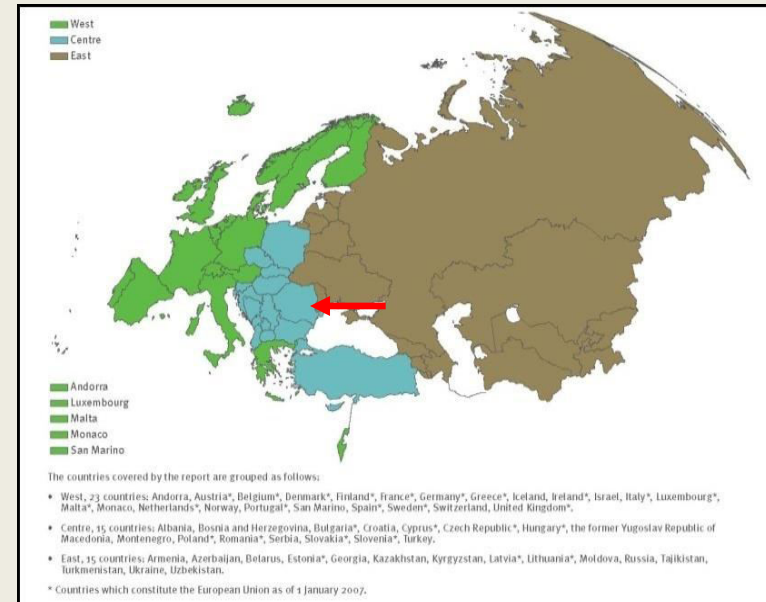
Figure 12. Reported average cost of ART per patient and year (2013)



ROMANIA 2014

Epidemiology/ key population/trends Romania 2014

- **Since 1985, 20,146 cases of HIV/AIDS have been diagnosed in Romania.** 65% of of them were children younger than 14 years of age at the time of the diagnosis, constituting the Romanian cohort exposed to nosocomial and horizontal HIV transmission.
- **12,866 people are living with HIV/AIDS in Romania as of December 31st 2014.**
 - 45% belong to the 25-29age group accounting for the Romanian cohort born in the late 80s’.
- **2014 registered the highest number ever of new cases of HIV/AIDS:**
 - Almost 2 out of 3 cases were male (72%).
 - 41% of all cases were in the group age 25-34 and 21% in the group age 15-24.
 - 13 cases have been diagnosed among children younger than 4 years of age
 - 7% were among people of 50 years and older.

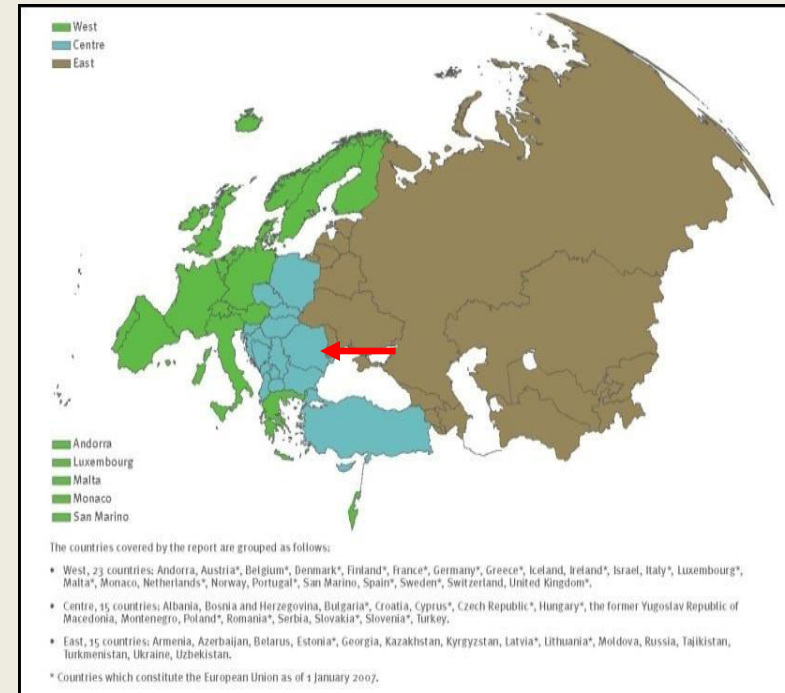


Epidemiology/ key population/trends Romania 2014

• As in the previous years, in 2014 the main route of HIV transmission remains the heterosexual unprotected sexual contact :

- 59% of all new cases,
- followed by injection drug use (21%) and
- MSM transmission (16%).

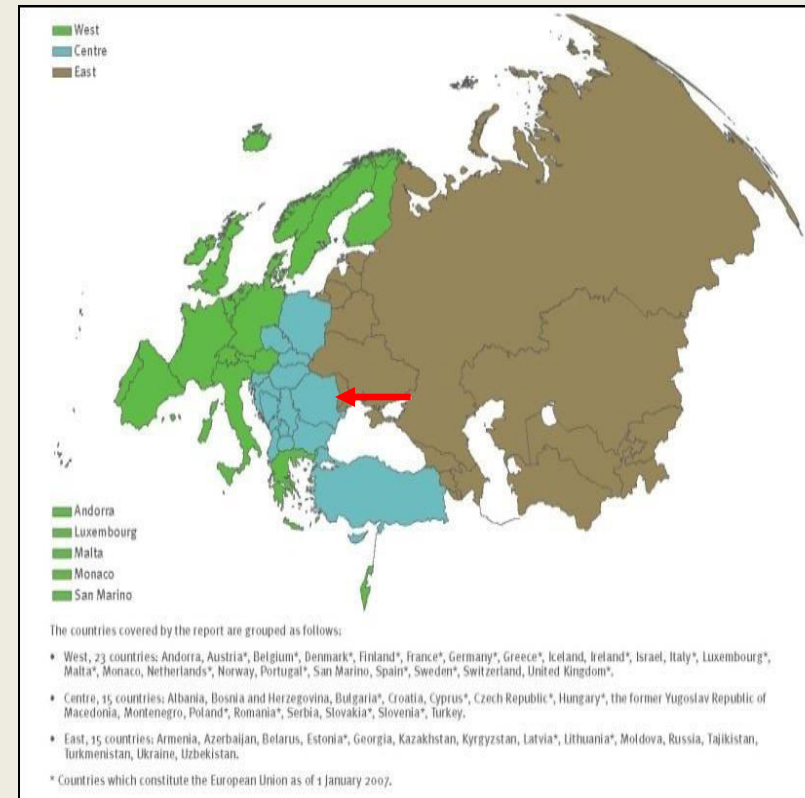
• The majority of new cases had a low CD4 count at the time of diagnosis. 56% from the total number of new cases registered a CD4 count <350 cells/mm3.



Epidemiology/ key population/trends Romania 2014

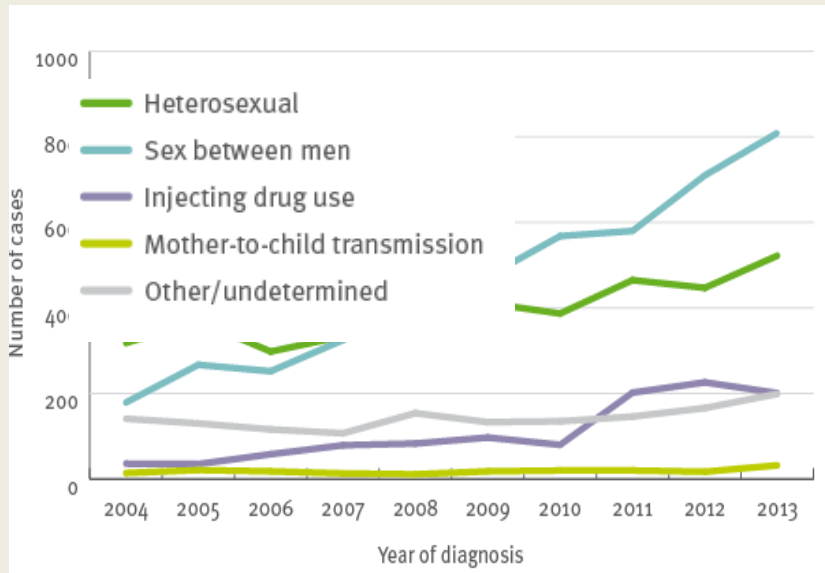
- The IDUs diagnosed in 2014 are mostly men and 74% are between 25 and 39 years old.
 - 40% of IDUs are using both heroine and new substances with psychoactive properties (known as “ethnobotanical drugs”).
 - 19% are using heroine
 - 11% “ethnobotanical” drugs.
 - Overall, 60% mix any two or three of the following: ethnobotanical drugs, heroin, cocaine, ecstasy.
 - 82% presented HIV- HCV co-infection and 16% HIV-TB co-infection.

- At the end of 2014 out of 11.708 patients in active surveillance:
 - 9571 (82%) were under specific ART treatment, of which:
 - 52% of women and 47% of men had > 500 CD4/cell.

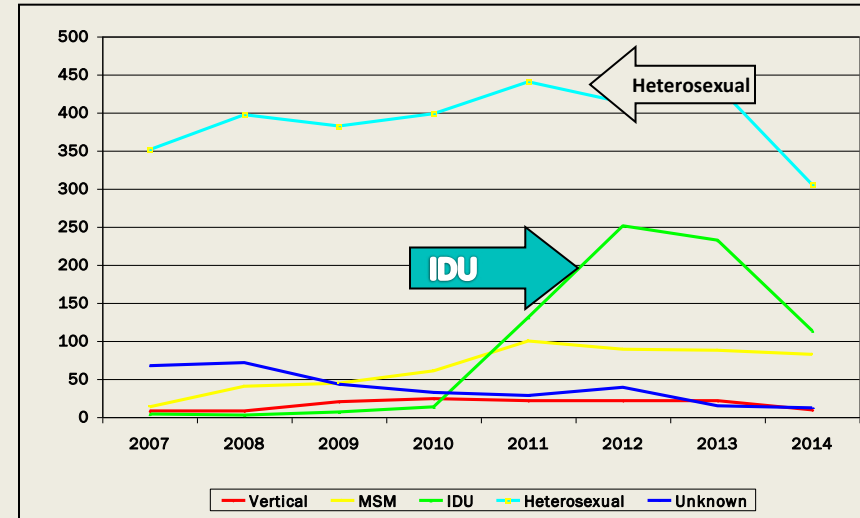


Epidemiology/ key population /trends Romania 2014 - WHO European Region

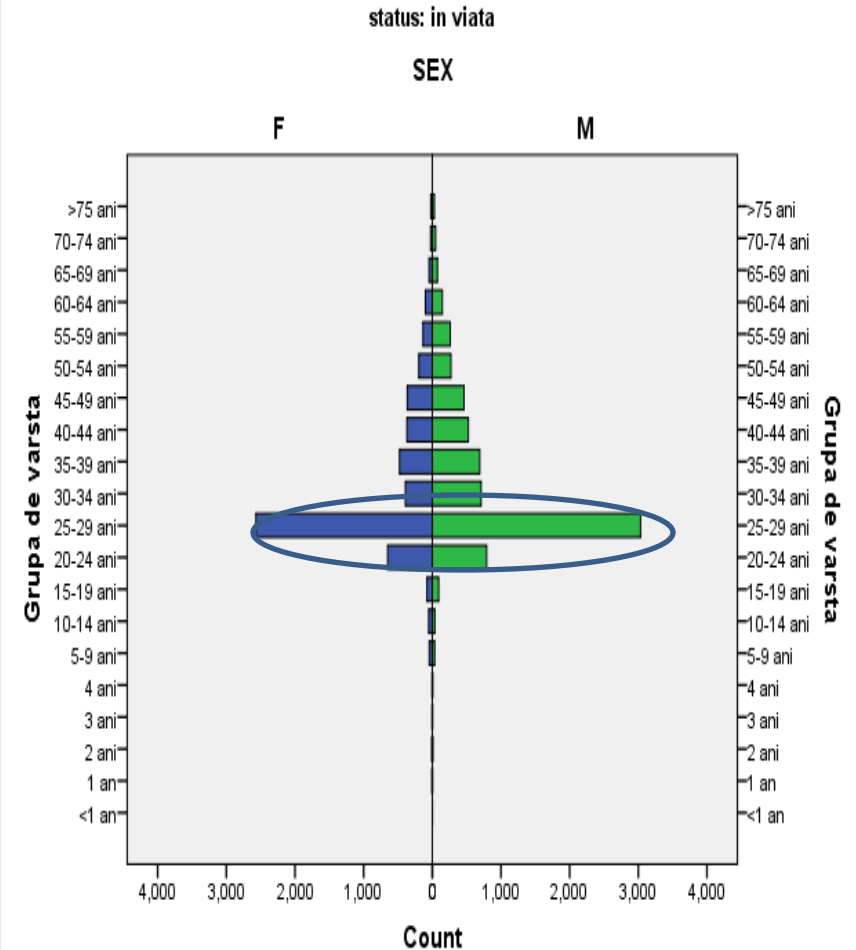
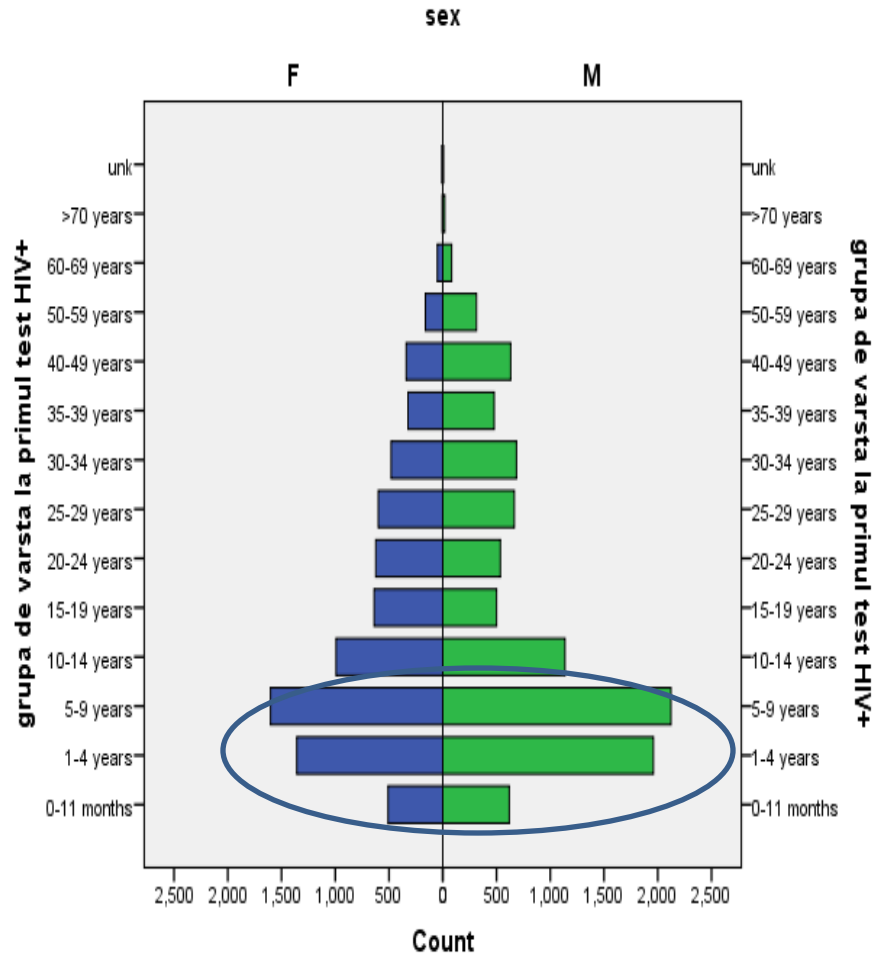
TRENDS OF REPORTED HIV INFECTIONS,
BY TRANSMISSION MODE AND YEAR OF DIAGNOSIS WHO
EUROPEAN REGION : CENTRE 2004-2013
ARITHMETIC SCALE



TRENDS OF REPORTED HIV INFECTION,
BY TRANSMISSION MODES IN ROMANIA
2007-2014
ARITHMETIC SCALE



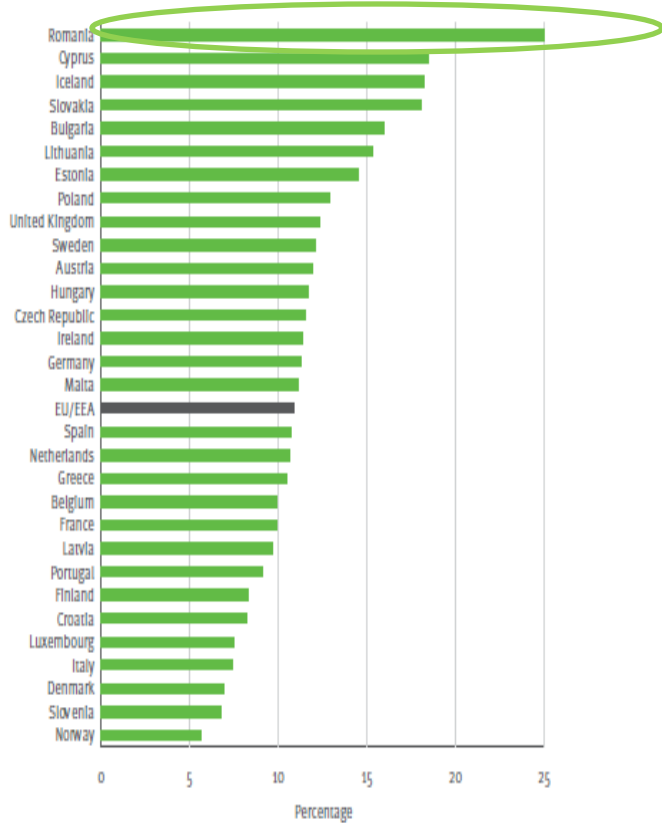
Distribution of ages



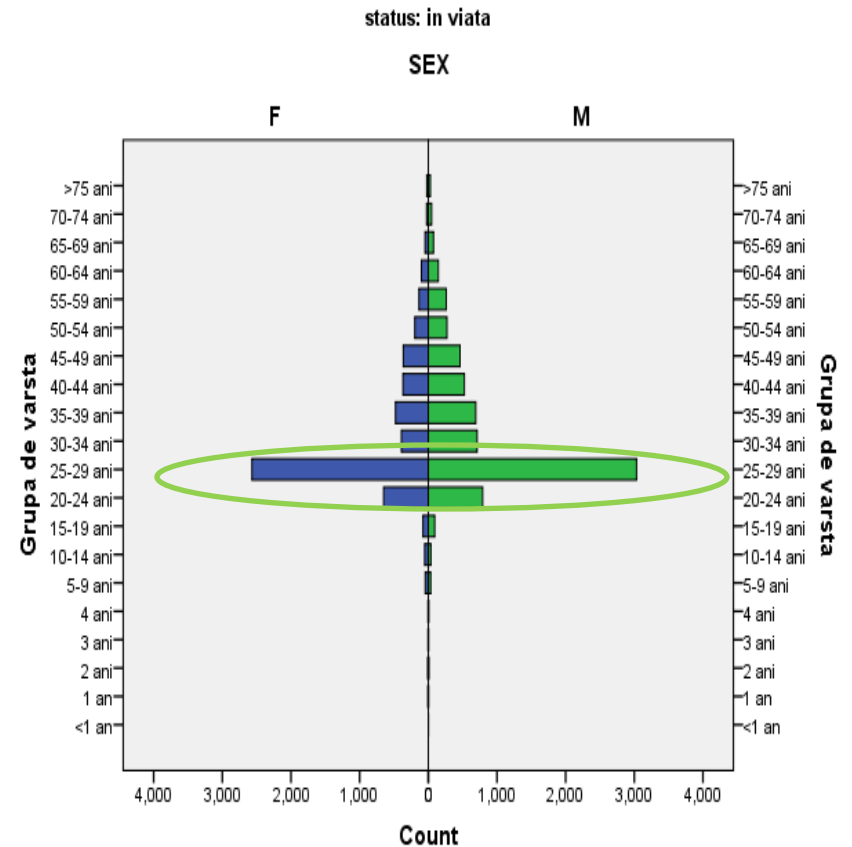
Epidemiology/trends in the WHO European Region and in Romania 2014

Percentage of new diagnoses in the 19-24 age group, by EU/EEA countries, 2013

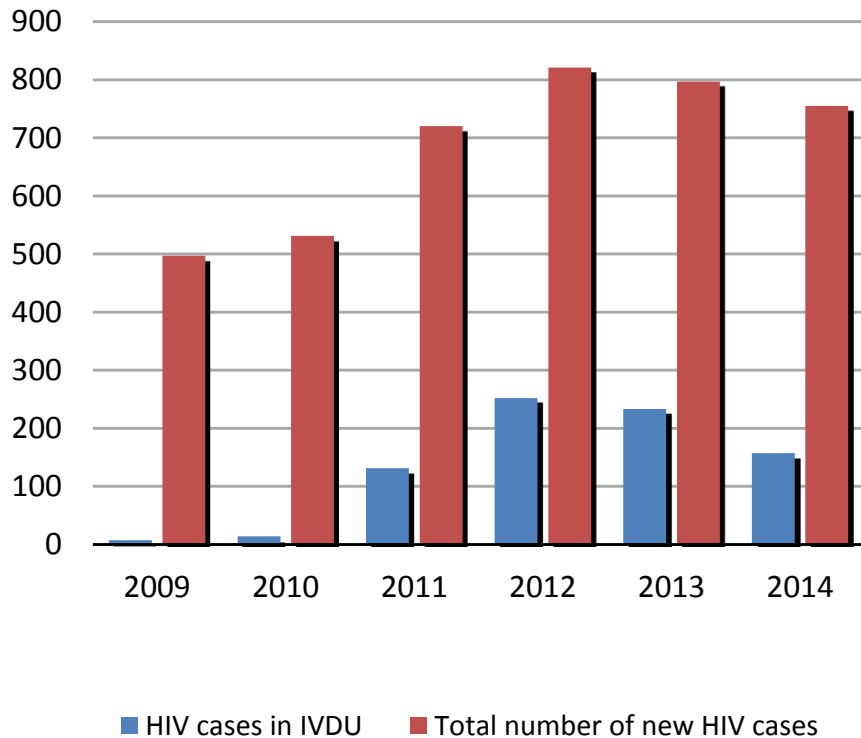
Figure E: Percentage of new HIV diagnoses in people between 15 and 24 years old, by country, EU/EEA, 2013 (n=29157)



Distribution of PLWHA from the Romanian cohort, by age groups 2014



HIV in IVDU...a new epidemic?



Change in drug use

2009 → 97% heroin

2010 → 1/3 amphetamine-type stimulants



More frequent injections

More likely to share needles

□ access to sterile needles

2014: 82% HIV+HCV 1,82% HIV+HBV 8.4% HIV+HCV+HBV 24,24% STI+HI 16% TB+HIV

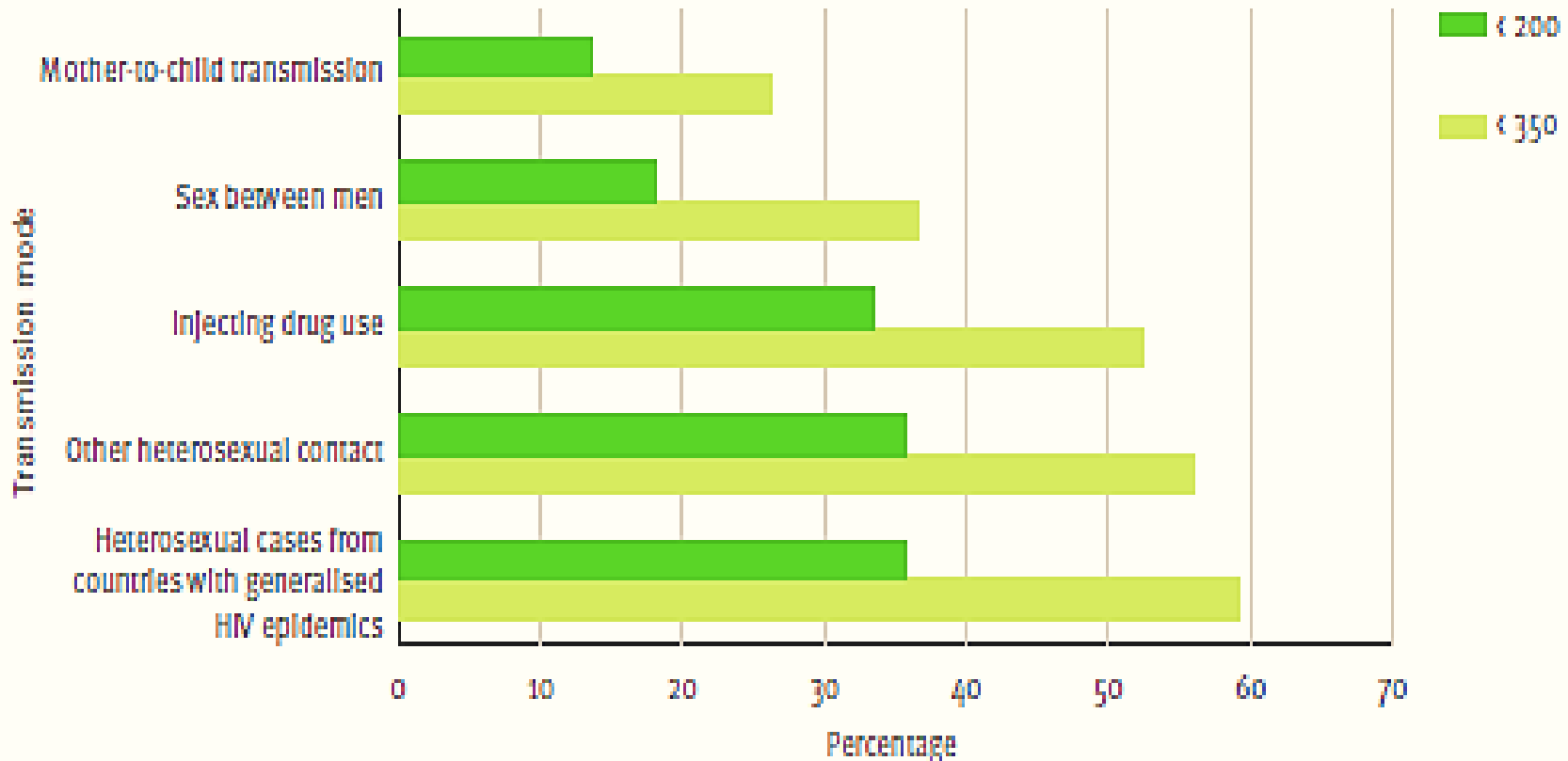
A.Streinu-Cercel. *Specific Challenges of the HIV Epidemic in Romania*. EACS Brussels, 2013.

Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania www.cnlas.ro;

Epidemiology/ key population /trends - WHO European Region 2013

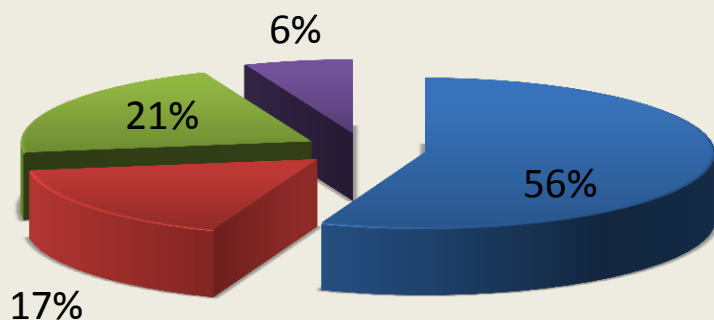
Percentage of CD4 count <350/mm and <200/mm by mode of transmission, EU/EEA 2013 (p.5)

Figure 1: Percentage of reported cases with a CD4 cell count <350/mm³ and <200/mm³ at presentation, by transmission mode, EU/EEA, 2013 (n=17 526)



Epidemiology/ key population/trends/ Percentage of CD4 count Romania 2014

CD4 values in new HIV/AIDS cases at adults- 2014



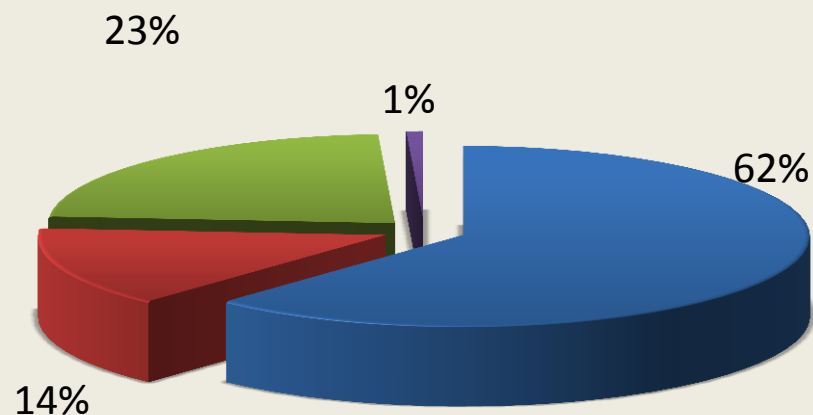
■ < 350

■ 351-500

■ > 500

■ Not assessed

CD4 in IDUs diagnosed with HIV/AIDS in 2014



■ <350

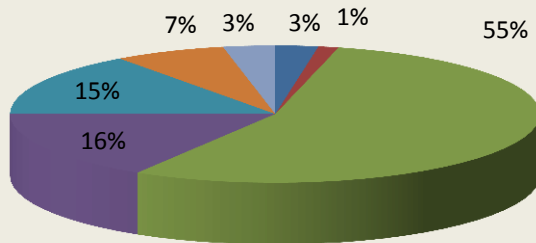
■ 351-500

■ >500

■ Not assessed

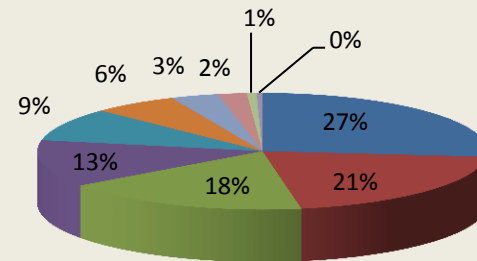
Epidemiology/ key population /trends/ART treatment Romania 2014

**DISTRIBUTION ON AGE GROUPS
OF PATIENTS IN ART AT 31 DECEMBER 2014**



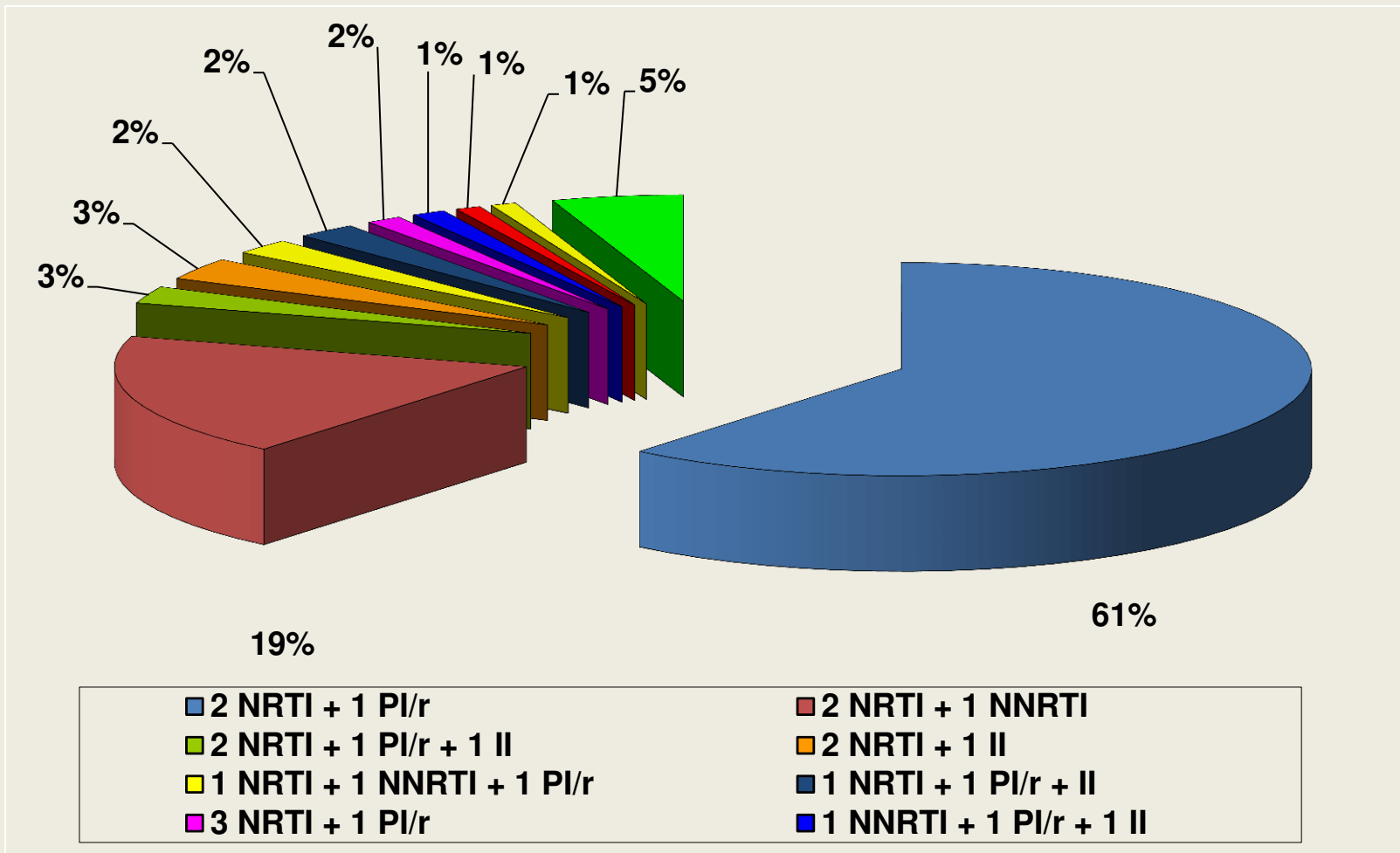
■ 0-14 YEARS ■ 15-19 YEARS ■ 20-29 YEARS
■ 30-39 YEARS ■ 40-49 YEARS ■ 50-59 YEARS
■ >=60 YEARS

**ADULTS (≥ 15 YEARS):
NUMBER OF ARV SCHEMES, PRIOR TO THE
CURRENT ONE**



■ 0 schemes ■ 1 scheme ■ 2 schemes
■ 3 schemes ■ 4 schemes ■ 5 schemes
■ 6 schemes ■ 7 schemes ■ 8 schemes
■ 9-14 schemes

ART schemes at 31 December 2014



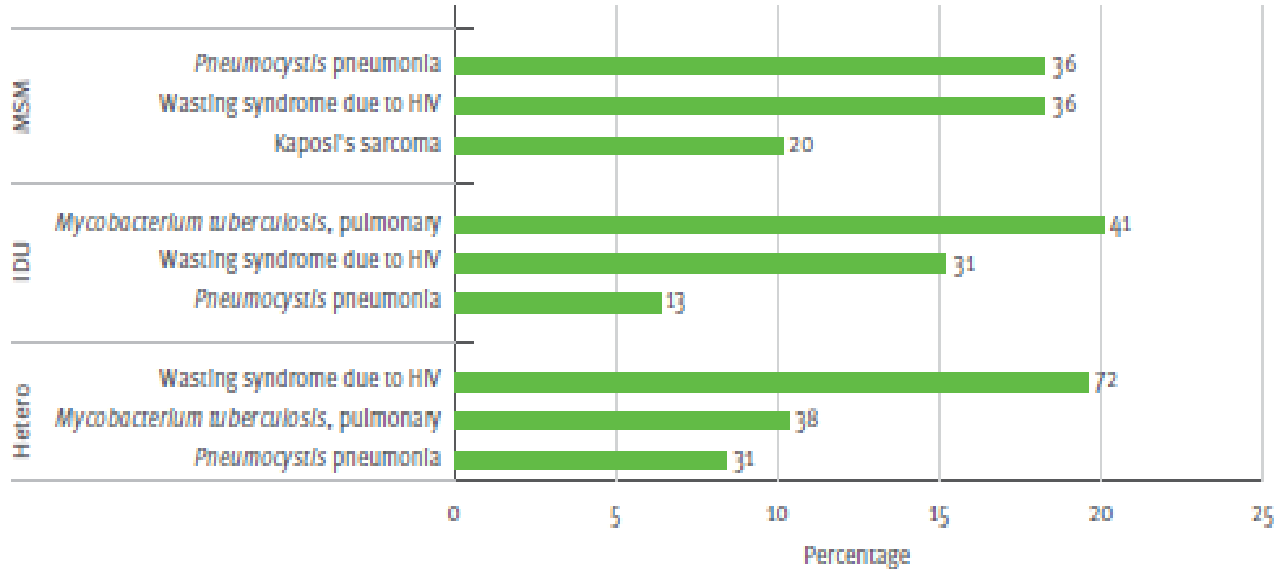
Assessment on 7200 patients.

Currently the entire cohort is under assessment, in terms of treatment, for 2014.

Epidemiology/ key population /trends WHO European Region 2013

Distribution of the three most common AIDS-indicative diseases per transmission mode, WHO, European Region, Centre, 2013

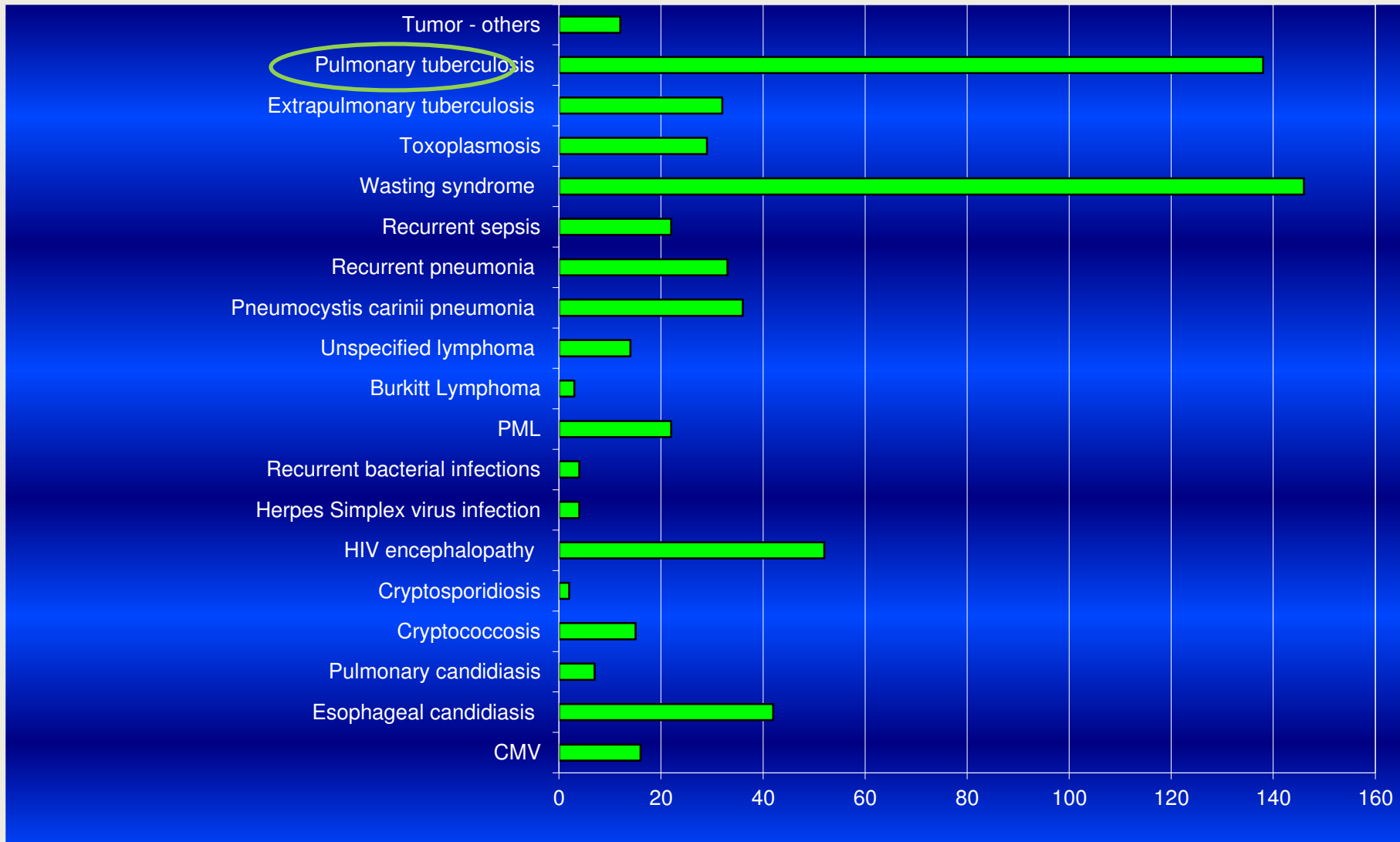
Figure U: Distribution of the three most common AIDS-indicative diseases per transmission mode, Centre, 2013



MSM: Man having sex with man; IDU: injecting drug use; Hetero: heterosexual transmission

Epidemiology/ key population /trends Romania 2013

AIDS indicative diseases

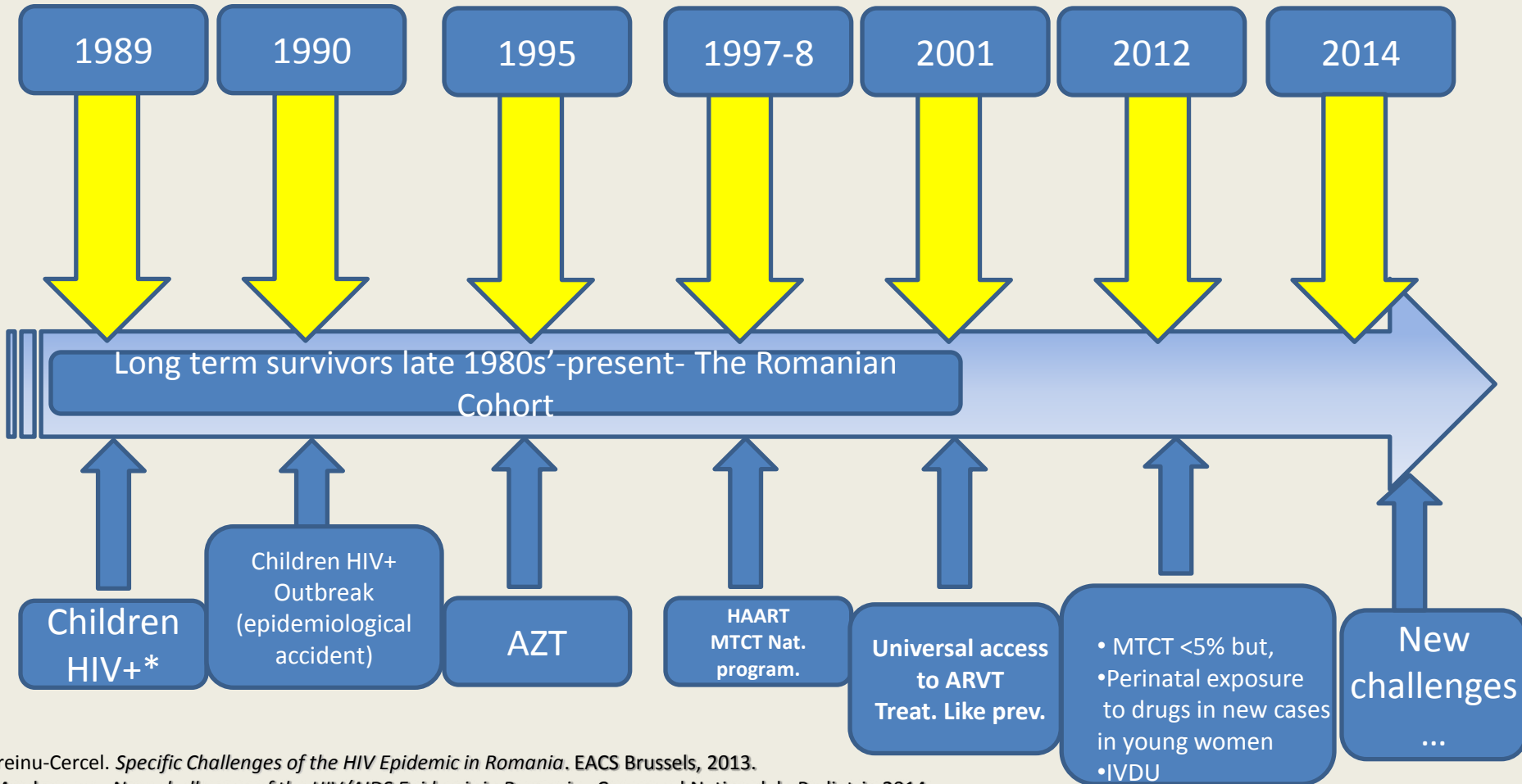


**WHERE DID WE LEAVE FROM AND
WHERE ARE WE NOW?**

Pediatric Milestones



YPLWHA



A.Streinu-Cerel. *Specific Challenges of the HIV Epidemic in Romania*. EACS Brussels, 2013.

M. Mardarescu. *New challenges of the HIV/AIDS Epidemic in Romania*. Congresul National de Pediatrie 2014.

Challenges for YPLWHA: 2014-2015



PLWHA

MTCT

ART Use

IDUs

Young by age, old by treatment
Therapeutic fatigue
New cases of HIV:
 young persons, in their fertile age, late presenters .
MSMs: dynamic increase in no. of cases.
Aging persons by age and by HIV (aging with HIV).

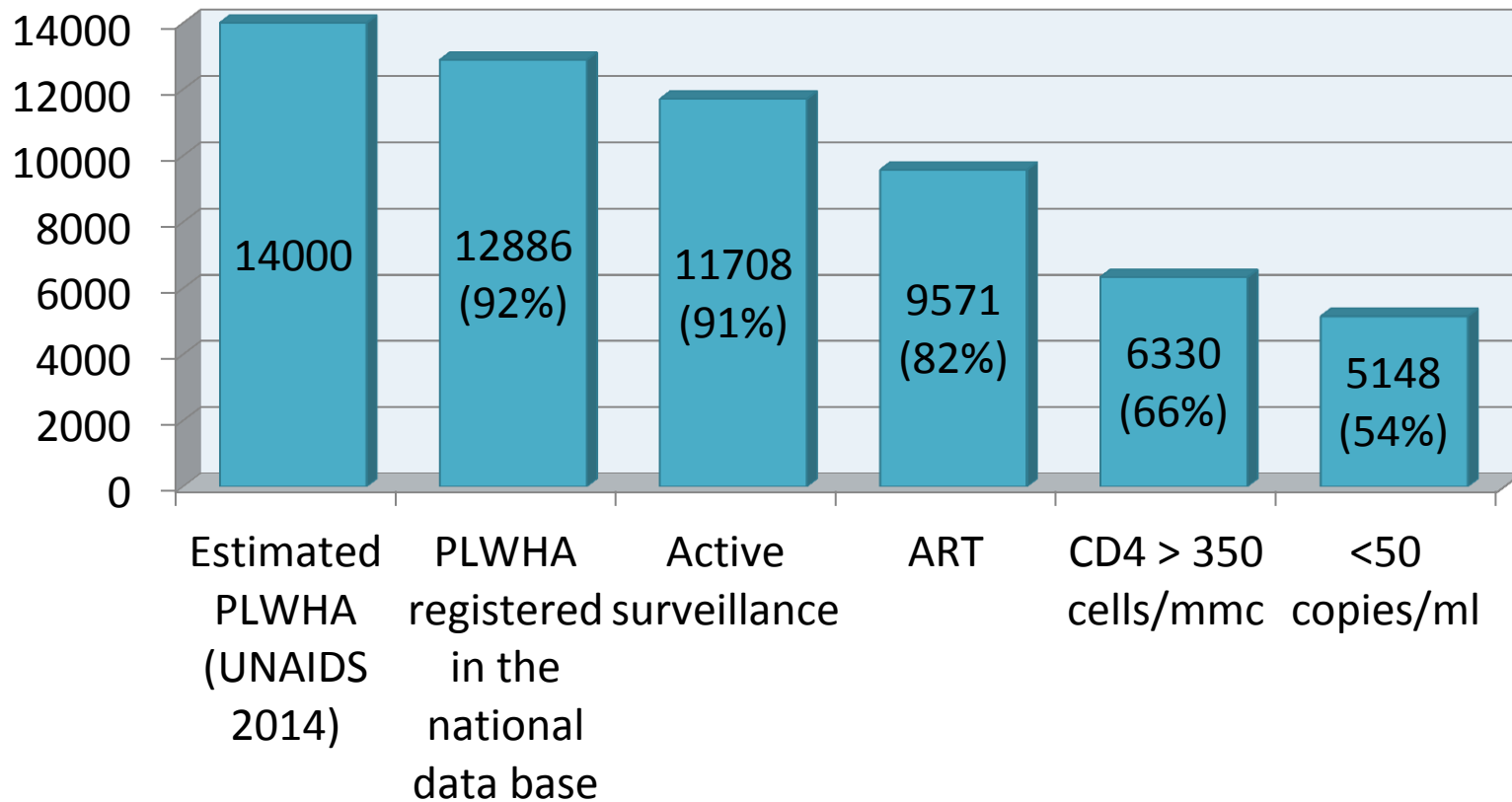
Young mothers, multi- experienced in ART
Mothers with unknown HIV status- should be tested and treated for HIV.
New approach for management of perinatally exposed newborns.
National Registry of the Perinatally exposed child and HIV infected women

Almost all ARVs are registered in Romania
Universal access to treatment
Treatment regardless of CD4 values.
Treatment as prevention.
Sub-optimal regimen in early childhood.
Antiretroviral associated toxicities.
Special issues in ART in young women .

New psychoactive drugs
New approach for the case management of the adult and the newborn to HIV mothers who use new drugs.

CASCADE OF CARE – 31 DECEMBER 2014

ROMANIA



The impact of HIV and ART on YPLWHA in Romania, long terms survivors and national efforts

- **Behavioural studies on YPLWHA from the Romanian cohort*:**
 - Behavioural survey among young people living with HIV/AIDS in Romania . Synthetic Report – Romanian Angel Appeal , September 2009
 - Survey on HIV risk behaviours among young people and adults infected , living with HIV/AIDS in Romania- Romanian Angel Appeal, 2011
- **Mother to child transmission of HIV**:**
 - *The National Registry of HIV Infected Pregnant women*, implemented since 1 January 2014 and coordinated by by National Institute for Infectious Diseases “Prof. Dr. Matei Bals” , through Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania.
- **Neurocognitive impairment**
 - *The Romanian National Screening Program for Neurocognitive Disorders*, coordinated by National Institute for Infectious Diseases “Prof. Dr. Matei Bals”- ongoing and initiated in 2013***.
 - 2 NIMH funded grants aiming to evaluate the long term effects of chronic HIV Infection on the Developing Brain, coordinated by “Dr. Victor Babes” Hospital Bucharest ** **

* www.raa.ro

** M. Mardarescu. Challenges and issues in young women. 5th International Workshop on HIV&women from adolescence to menopause. 21-22 February, Seattle.

***A. Streinu Cercel, O. Chirila, L. Ene, D. Duiculescu Romanian National Neurocognitive Screening Group. Assessment of Neurocognitive Impairment in the Romanian HIV-infected Young Adults Cohort by a National Screening Program Using a Standardized Tests Battery, 14rd European AIDS Conference, Brussels 2013, Abstract-No: PE15/17.

** ** L. Ene, D.R. Franklin, R.Burlacu, A.E.Luca, A.G.. Blaglosov, R.J.. Ellis, T.J. Alexander,A. Umlauf, I.Grant, D.C. Duiculescu, C.I. Achim, T.D. Marcotte, D .Neurocognitive functioning in a Romanian Cohort of Young Adults with Parenterally-Acquired HIV-Infection during Childhood Journal of NeuroVirology published online 4 Sept 2014 DOI: 10.1007/s13365-014-0275-1

The impact of HIV and ART on YPLWHA in Romania, long terms survivors and national efforts

- **National adherence project *****
- **National Evaluation Program of Adherence ******
- **Cardiovascular impairment**
 - *Ongoing Pilot Project on Prevention and Monitoring HIV related cardio-metabolic risks -INBI's cohort, initiated in November 2014 and coordinated by National Institute for Infectious Diseases "Prof. Dr. Matei Bals". The first stage assessment- programmed in November 2015.*
- **Osteo-renal impairment**
 - **Ongoing pilot study initiated in March 2015.**

*** Duiculescu D, Blaglosov A, Luca A, **Ene L**, Rugina S., Streinu-Cercel A, and The Romanian Adherence Group, Evaluation of adherence to antiretroviral regimen- containing Kaletra in a group of adolescents with chronic HIV-1 infection from Romania, XVII International AIDS Conference, 4-8 August 2008, Mexico City, Mexic;

**** O. Chirila, S. Petrea, C. Schiopu, National Program of Adherence Assessment, Scientific Days of Matei Bals Institute "From Pasteur at mass-spectrometry", 13 – 16 October 2010, Bucharest.

- **The Romanian care system addressed to the HIV/AIDS cohort has been founded, during the last two decades, on multiple social and psychological determinants, among which:**
 - The patients' age at the moment of diagnosis;
 - Living with the biological family (YES or NO);
 - The family's level of education;
 - Acceptance on behalf of the society/level of discrimination;
 - The transition from the paediatric ward to the adult ward is accepted with difficulties by the young patients;
 - The social behaviour- the same as the uninfected young population;
 - ART adherence that depends entirely on the time of initiation >20 years in Romania
 - ART treatment- difficult to individualise and adapt during the early 1990s
 - Counselling on self perception, on body image and acceptance of one's status
 - Marital status, serodiscordant couples, unplanned pregnancies
 - They want children and families of their own, but are not prepared for this due to their health status
 - Specialized family planning services

TAKE HOME MESSAGES...

Take home messages

- ❑ **Most PLWHA in Romania are YPLWHA.**
 - **“Long term survivors”, infected at the end of the 1980s;**
 - **From the new cases registered during the last years- most are young persons, with sexually acquired HIV and I.V. drug use.**
 - **Dynamic increase in new cases in MSMs**

- ❑ **Multiple therapeutic regimens since 1995 - impact on ART resistance.**
 - **Serodiscordant couples who require special attention and specific cares.**

 - **Raising awareness for optimal selection of proper contraception methods , in order to avoid unplanned pregnancies.**

 - **In 2014 MTCT rate represented 2% of the new reported cases.**

 - **Further efforts are made to keep the MTCT rate at low values.**

Take home messages

□ The importance of managing the following aspects in PWLHA:

- 56% of the new HIV cases in 2014 were late presenters, with CD4<350.
- ART in TB/HIV coinfection
- ART in HIV and HBV/HCV coinfection

- Particularities of new HIV-IDUs with psycho-active substances (*“ethnobotannical”* drugs).

- ART in neurocognitive disorders → young by age old by treatment

- ART in cardio-metabolic risks → young by age old by treatment

References

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<http://www.justrislide.com/swfs/A2957.swf>
- C. Miralles, M. Mărdărescu, L. Sherr. What do we know about the situation of women living with HIV in Europe? Antiviral Therapy 2013; 18 Suppl 2:11-14.
- M. Mărdărescu, T. Branco. East meets West: Management of Women Living with HIV/AIDS. European AIDS Conference 2011. Belgrade
- < <http://www.womenforpositiveaction.org/resource-centre> >
- A. Botescu, A. Abagiu, M. Mărdărescu, M. Ursan. *HIV/AIDS Amongst IDUs in Romania. Report of a recent outbreak and initial response policies, 2012.*
- < http://webcache.googleusercontent.com/search?q=cache:aCkmlkl3stsJ:www.emcdda.europa.eu/attachments.cfm/att_192024_EN_HIV_outbreak_Romania_2012.pdf+%&cd=1&hl=ro&ct=clnk&gl=ro >
- **A. Streinu-Cercel. *Specific challenges of the HIV Epidemic in Romania*. EACS Brussels, 2013**
http://www.cnlas.ro/images/doc/spec_chall_HIV.pdf
- Ghidul TARV Romania 2013-2014. Ministerul Sanatatii Publice, Comisia de Lupta ANTI_SIDA; Institutul National de Boli Infectioase “Prof. Dr. Matei Bals”
http://www.cnlas.ro/images/doc/GhidTARV_2014.pdf

*Warm thanks to our patients and their parents,
long distance runners who have been joining
their efforts together with the medical staff,
for the past 25 years...*

**The data is collected from the HIV/AIDS charts, sent
by the
nine Regional Centers for Evaluation and Monitoring
of HIV/AIDS Data and by County Public Health
Authorities, further processed by Compartment for
Monitoring and Evaluation of HIV/AIDS data in
Romania, in National Institute for Infectious
Diseases “Prof. Dr. Matei Bals”**



National Institute for Infectious Diseases “Prof. Dr. Matei Bals” Compartment for Monitoring and Evaluation of HIV/AIDS Data in Romania

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Coordinator Children Programme:

Dr. Sorin Petrea

Statistical data operators :

PC Operators:

As.med. Marieta Iancu

Daniela Vițelaru

Sanda Vintilă

Epidemiology:

Dr. Ionel Iosif

In Collaboration with:

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Romanian HIV/AIDS Centre