

# Bulletin

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# Visceral and cutaneous leishmaniasis in Albania: retrospective analysis for the period of 2005-2013

Teita Myrseli, Artan Simaku, Migena Baci, Silva Bino

Department of Infectious Diseases Control

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Leishmaniasis is an infectious disease caused by protozoan parasitic transmission-vector of *Leishmania* gender. It is a zoonosis that infects people, and dog serves as its reservoir.

Leishmaniasis is a general term that is used for diseases caused by all kinds of protozoan *Leishmania* gender. Leishmaniasis at human beings is manifested in some different forms, which are divided into three entities: visceral leishmaniasis (VL), cutaneous leishmaniasis (CL) and mucus-cutaneous leishmaniasis (MCL). In the Mediterranean region, where our country is included, there are two types of clinical forms of it affecting human beings:

- Visceral zoonotic leishmaniasis (VZL- caused from *L. infantum*)
- Cutaneous leishmaniasis (KL – caused from *L. infantum* and *L. tropica*)

Protozoan *Leishmania spp.* is present in two morphological forms: amastigote form, which is found in human beings and in mammal hosts, as well as the pro-amastigote form, found in transmission vectors and in culture.

The clinical introduction varies from asymptomatic forms to those with high mortality. The people most at risk to develop this illness are malnourished children, rural zone population and the persons suffering from immune-deficiency (HIV/AIDS cases). The incubation period is long, of an average of 3-8 months, but it surpasses 10 years in cases of reactivation of latent infections. The death rate for the treated cases varies from 2-3%, but there are also countries where the death rate reaches 17 %. In the increase of death rate a lot of factors influence, and namely: a late diagnosis, non-adequate medication or treatment (toxicity of medications, of treatment and/or the manifestation of resistant forms.) For LV medication treatment is recommended amphotericin B, the liposomal form (liposomal amphotericin B,) but because of its high cost, in many countries there are still used preparations of five-valence antimony. During the medical treatment and their increase, they cause toxic overdoses that, in addition to pancreatic disorders, they even cause cardiac problems.

The responsible virus for Leishmaniasis transition in our country is *Phlebotomus spp.* VL, that is identified in the Mediterranean region, which is a zoonose with dog as main reservoir. This infection, which derives from *L. infantum* is also recorded in cats, horses, pigs and in wild animals such as: foxes, wolves, jackals, bats, different rodents, etc. ZVL infects mainly young children until the age

of 4. According to a study made in Albania in the years 1960-1994, there have been registered 2130 cases with VL, from which 2040 children and 90 grown-ups, while during the period of 1995-2000 there have been 591 new hospitalizations, and 95 cases were grown-ups treated with medications in UHCT.

This diagnoses were established serologically by IFAT and ELISA methods. The serum has been separated from the intravenous blood and the detection of anti-bodies of IgG anti-Leishmania has been made in all the sera. There has been used a commercial and antigen test, which has been provided in lab for IFAT by using pro-amastigote of *L. Infantum* according to the recommended protocol of OIE and reference labs of WHO, (ISS-Rome and Crete.) Also there has been used the method of parasite isolation from the culture. The material taken from spinal-cord and the bones of patients was conserved in isolation in terrain Novy MacNeal Nicolle (NNN) and Evans' Modified Tobie (EMTM) and the cultures were examined periodically for the pro-amastigote growth. In the below table we are reporting the introduction of epidemiologic situation of ZVL and CL during the period of 2005-2013 in Albania, as well as the problems that are connected with the report of the these zoonological cases of the Institute of Public Health in the monthly overview 14Sh.

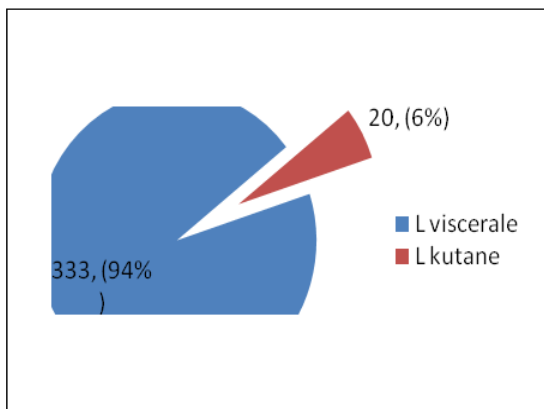
**The Leishmaniasis spread in Albania during the years of 2005 -2013**

**Table 1. The cases and incidence of Leishmaniasis in Albania during years 2005 -2013**

	Number of cases	Case incidence /100000 residents
ZVL	333	10.9
CL	20	0.7
Total	353	11.5

From the above Table we can observe that ZVL is more commonly found in comparison to cutaneous leishmaniasis. There was also observed an accumulative incidence for the years of 2005-2013, which was high, but comparable to other countries in the region before the onset of HIV epidemic.

**Figure 1. ZVL and CL frequencies during the years of 2005 -2013**



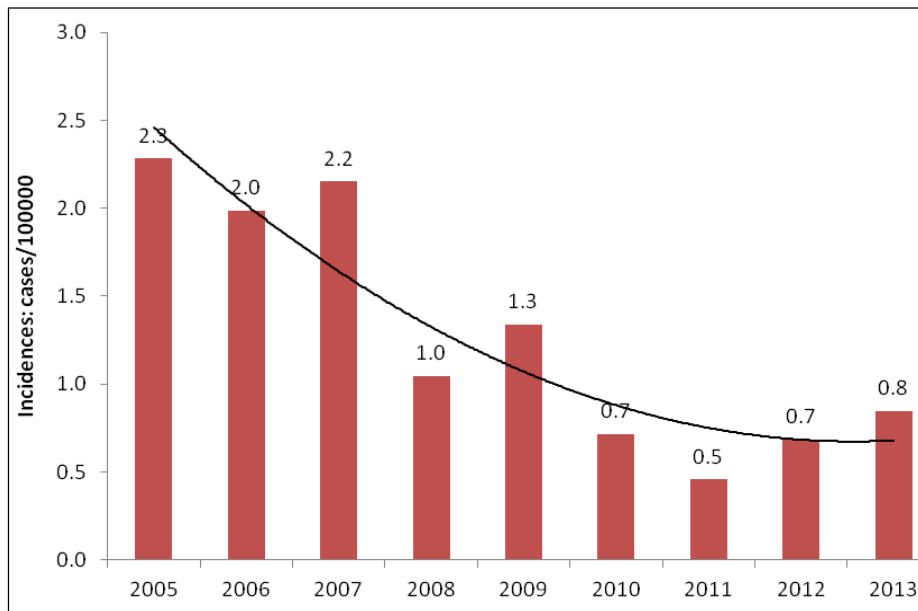
The ZVL frequencies are shown as high in comparison to CL.

In total, during the period of 2005-2013, there have been reported 353 cases with Leish- mania, from which 20 cases or 6% of the total are CL and 333 cases or 94% of them are VL (p<0.05.) The incidence of ZVL is 10.9 cases/100000 residents, whereas the incidence of CL is 0.2 cases/100000 residents. The incidence of VL and CL all together is 11.4 cases/100000 residents.

**Table 2. Number of cases for VL and CL 2005 -2013**

Years	L. visceral	L. cutaneous	Total
2005	67	3	70
2006	58	3	61
2007	59	7	66
2008	30	2	32
2009	40	1	41
2010	21	1	22
2011	13	1	14
2012	21		21
2013	24	2	26

**Figure 2. Incidences of VL and CL during the years of 2005-2013 in Albania.**



The incidence of Leishmaniasis undergoes an observed trend of decrease during the period of study (F-ratio=16.8 p<0.01). The incidence presents a sharp decrease from 2.3 cases/100000 residents in the year 2005, to 0.5 cases/100000 residents in year 2011. But at the same time, it is noticed an increasing trend for years of 2012 and 2013 with 0.7 and 0.8 cases/100.000 residents.

**Table 3. The spread of VL cases according to the localities during 2005-2013**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Berat	1	1	10	3	1	3	2	3	2	<b>26</b>
Bulqizë	2	5	1	2	1		2			<b>13</b>
Delvinë			1						1	<b>2</b>
Devoll										
Dibër	1			2	1					<b>4</b>
Durrës	1				1	1			2	<b>5</b>
Elbasan	9	4	5	1	1		2	1		<b>23</b>
Fier	1	1		2	1			1	2	<b>8</b>
Gramsh	1		1		1	1				<b>4</b>
Gjirokastrë			2	2						<b>4</b>
Has										
Kavajë			1							<b>1</b>
Kolonjë										
Korçë										
Krujë										
Kuçovë		1			1	1			1	<b>4</b>
Kukës	2	2			2		1			<b>7</b>
Laç	2	2	1	2				1		<b>8</b>
Lezhë	2	2	5	1	5	3		3	3	<b>24</b>
Librazhd	5	1			2		1	2		<b>11</b>
Lushnjë										
M.Madhe										
Mallakastër						1		1		<b>2</b>
Mat	3	1			1	1	1		2	<b>9</b>
Mirditë	1			1	1	1				<b>4</b>
Peqin								1		<b>1</b>
Përmet		2			1	1				<b>4</b>
Pogradec									1	<b>1</b>
Pukë		2								<b>2</b>
Sarandë			1			1	2	3		<b>7</b>
Skrapar			1	1	1					<b>3</b>
Shkodër	24	22	16	6	5	3			1	<b>77</b>
Tepelenë	2	1		3				1		<b>7</b>
Tiranë	10	10	10	4	13	4	2	3	7	<b>63</b>
Tropojë									2	<b>2</b>
Vlorë		1	4		1			1		<b>7</b>

**Table 4. The CL number of cases according to the localities during 2005-2013.**

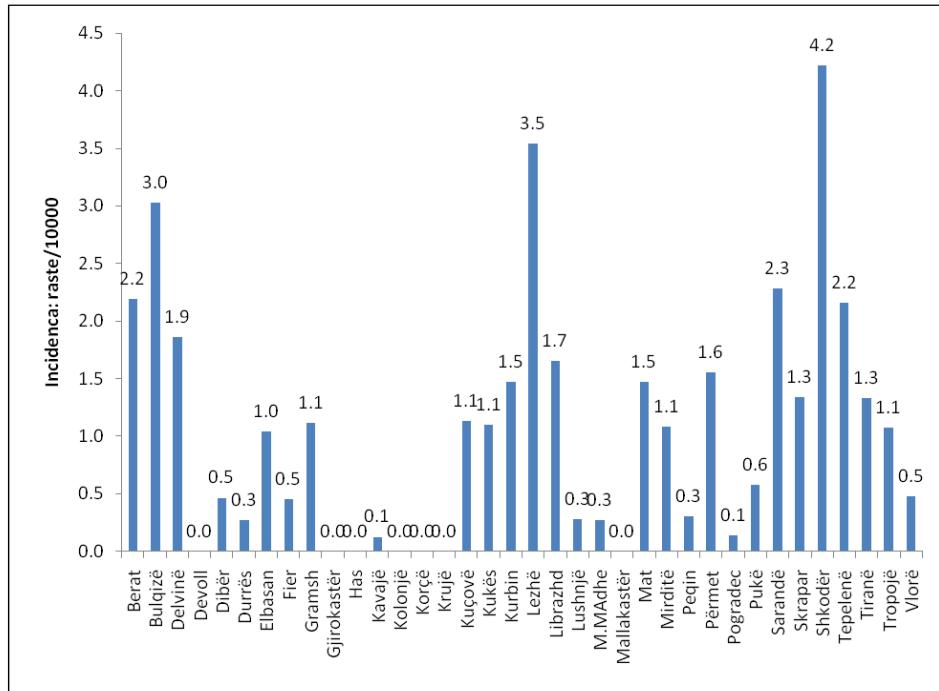
	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Berat							1		1	2
Bulqizë										
Delvinë										
Devoll										
Dibër										
Durrës										
Elbasan										
Fier			1							1
Gramsh										
Gjirokastrë					1					
Has										
Kavajë										
Kolonjë										
Korçë										
Krujë										
Kuçovë										
Kukës										
Laç										
Lezhë										
Librazhd		1								1
Lushnjë	2			1					1	4
M.Madhe			1							1
Mallakastër										
Mat										
Mirditë										
Peqin										
Përmet										
Pogradec										
Pukë										
Sarandë						1				1
Skrapar	1									1
Shkodër		1								1
Tepelenë										
Tiranë			5		1					6
Tropojë		1								1
Vlorë										



**Table 5. VL and CL number of cases according to localities, in 2005-2013.**

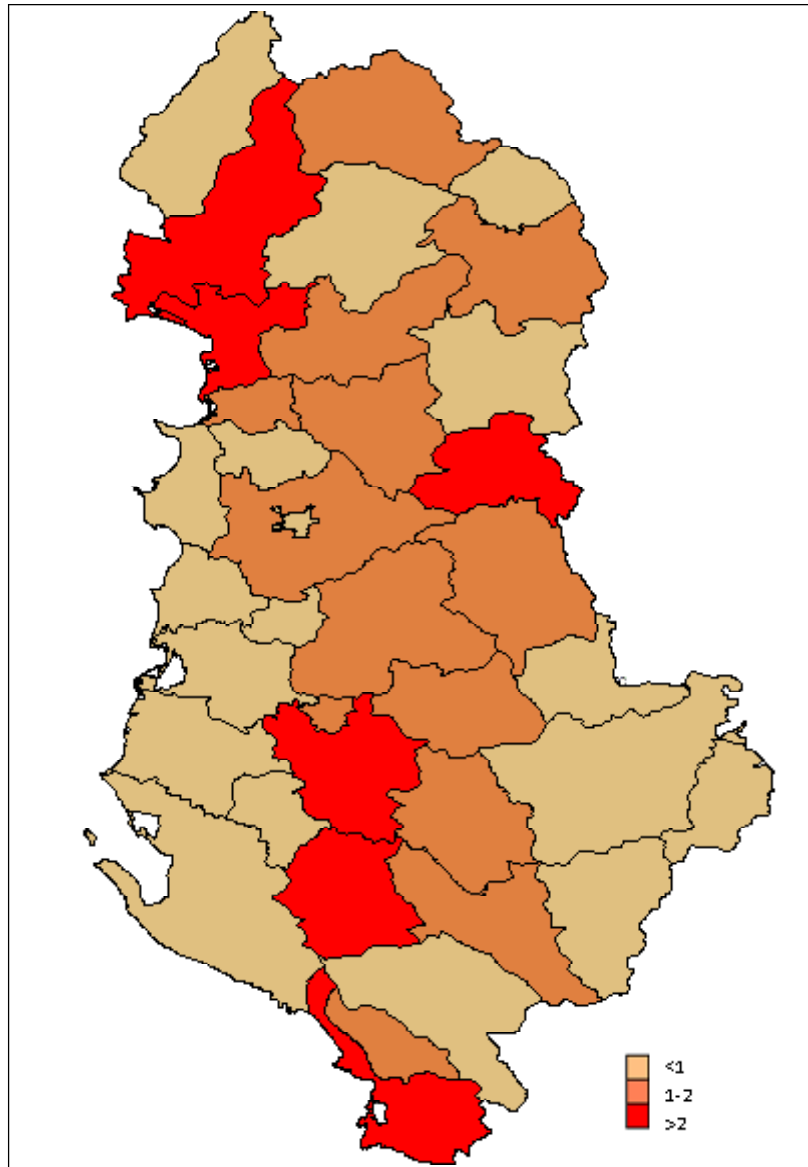
	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Berat	1	1	10	3	1	3	3	3	3	28
Bulqizë	2	5	1	2	1		2			13
Delvinë			1						1	2
Devoll										
Dibër	1			2	1					4
Durrës	1				1	1			2	5
Elbasan	9	4	5	1	1		2	1		23
Fier	1	1	1	2	1			1	2	9
Gramsh	1		1		1	1				4
Gjirokastrë			2	2	1					
Has										
Kavajë			1							1
Kolonjë										
Korçë										
Krujë										
Kuçovë		1			1	1			1	4
Kukës	2	2			2		1			7
Laç	2	2	1	2				1		8
Lezhë	2	2	5	1	5	3		3	3	24
Librazhd	5	2			2		1	2		12
Lushnjë	2			1					1	4
M.Madhe			1							1
Mallakastër						1		1		
Mat	3	1			1	1	1		2	9
Mirditë	1			1	1	1				4
Peqin								1		1
Përmet		2			1	1				4
Pogradec									1	1
Pukë		2								2
Sarandë			1			2	2	3		8
Skrapar	1		1	1	1					4
Shkodër	24	23	16	6	5	3			1	78
Tepelenë	2	1		3				1		7
Tiranë	10	10	15	4	14	4	2	3	7	69
Tropojë		1							2	3
Vlorë		1	4		1			1		7

**Figure 3. The incidence of VL and CL according to localities during the period of 2005-2013 (cases/10000 residents)**



The highest incidence of Leishmaniasis was found in those localities: Bulqiza (3 cases/10000 residents,) Lezha (3 cases/ 10000 residents,) Shkodra (4.2 cases/10000 residents.) Also, there are other localities with a high incidence such as Saranda, Tepelena, Berati and Delvina.

**Map 1. VL and CL incidence of according to localities (cases/10000 residents.)**



It is observed that the incidence of leishmaniasis is less than 1 case/10000 residents in localities such as: Big Mountain, Has, Puka, Dibra, Durrës, Kruja, Kavaja, Peqin, Lushnja, Fier, Vlora, Mallakstra, Gjirokastra, Kolonja, Korça, Devolli, Pogradec

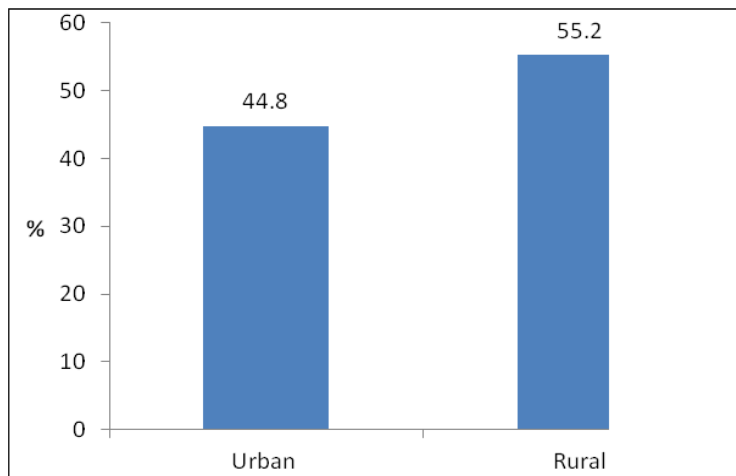
In localities such as: Tropoja, Kukesi, Mirdita, Kurbini, Mati, Tirana, Elbasani, Librazhdi, Gramshi, Skrapari, Permeti, Delvina the incidence is over 1-2 cases/10000 residents.

In localities of Shkodra, Lezha, Bulqiza, Berati, Tepelena, Saranda the incidence is over 2 cases/10000 residents.

**Table 6. Cases spread out according to residence**

	City (no,%)	Village (no,%)	Total
ZVL	149 (44.7)	184 (55.3)	333
CL	9 (45.0)	11 (55.0)	20
<b>Total</b>	<b>158 (44.8)</b>	<b>195 (55.2)</b>	<b>353</b>

**Figure 4. Distribution of cases by residence**

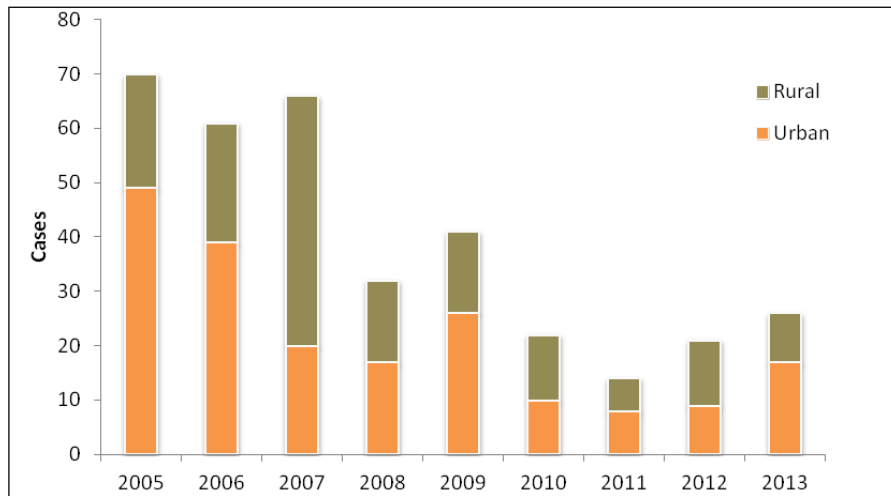


Most of the patients, 195 (55.2%) are resident in village/rural areas compared with 158 (44.8%) patients resident in cities/urban areas, but without significant change ( $p>0.05$ .)

**Table 7. The spread of cases according to residences in the years**

	City	Village
2005	21	49
2006	22	39
2007	46	20
2008	15	17
2009	15	26
2010	12	10
2011	6	8
2012	12	9
2013	9	17

**Figure 5. Distribution of cases by residence over the years**

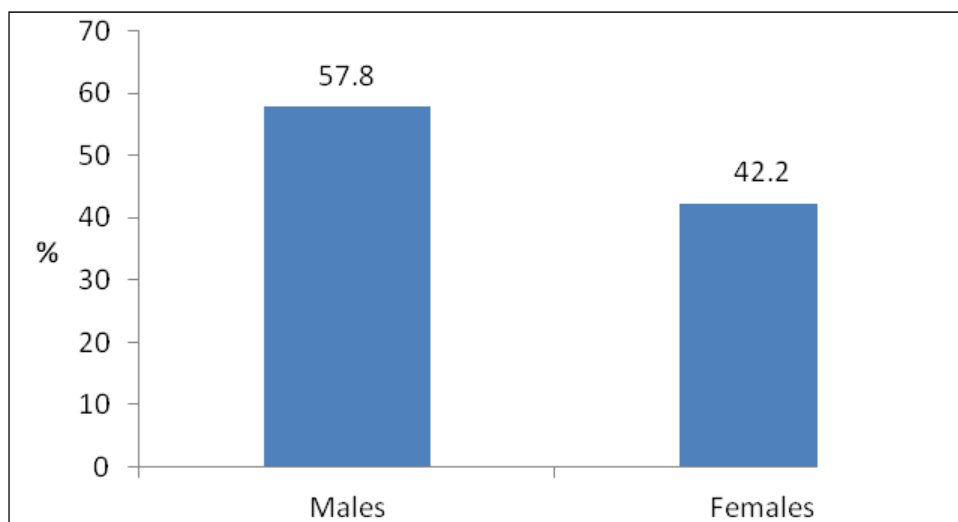


It is observed that in years 2005 and 2006 the leishmaniasis was spread in village/rural areas with a significant change with that of city/urban areas, in year 2007 this disease covered urban areas, whereas in year 2008 until the year of 2013 there has not been any significant difference between village and city ( $p < 0.01$ .)

**Table 8. The spread of cases according to gender**

	Males (no,%)	Females (no,%)	Total
ZVL	194 (58.3)	139 (41.7)	333
KL	10 (50.0)	10 (50.0)	20
Total	204 (57.8)	149 (42.2)	353

**Figure 6. Distribution of cases by gender**

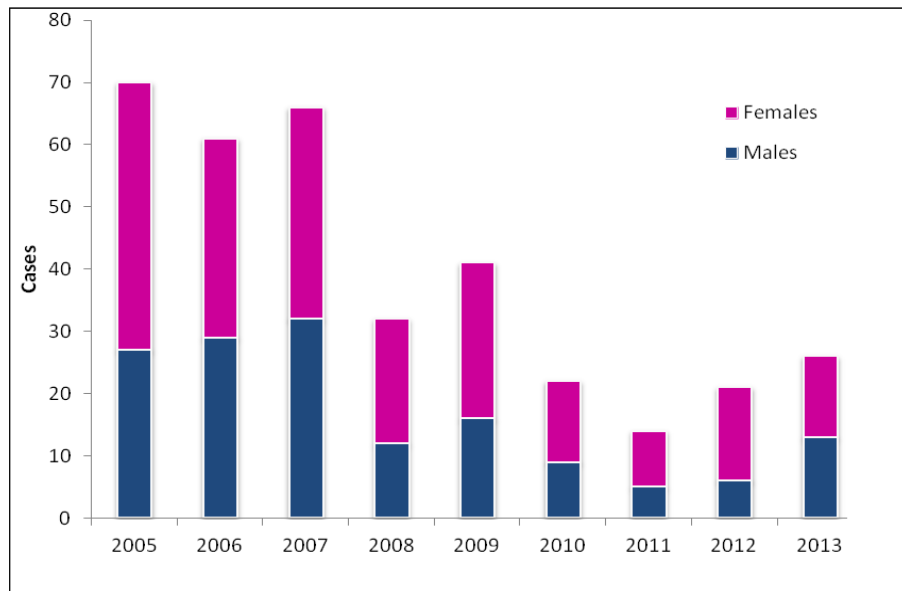


Most of the patients, 204 (57.8%) are males compared with 149 (42.2%) female patients ,with a significant difference between them ( $p>0.05$ .)

**Table 9. The spread of cases according to gender during years**

	Males	Females
2005	43	27
2006	32	29
2007	34	32
2008	20	12
2009	25	16
2010	13	9
2011	9	5
2012	15	6
2013	13	13

**Figure 7. Distribution of cases by gender over the years**

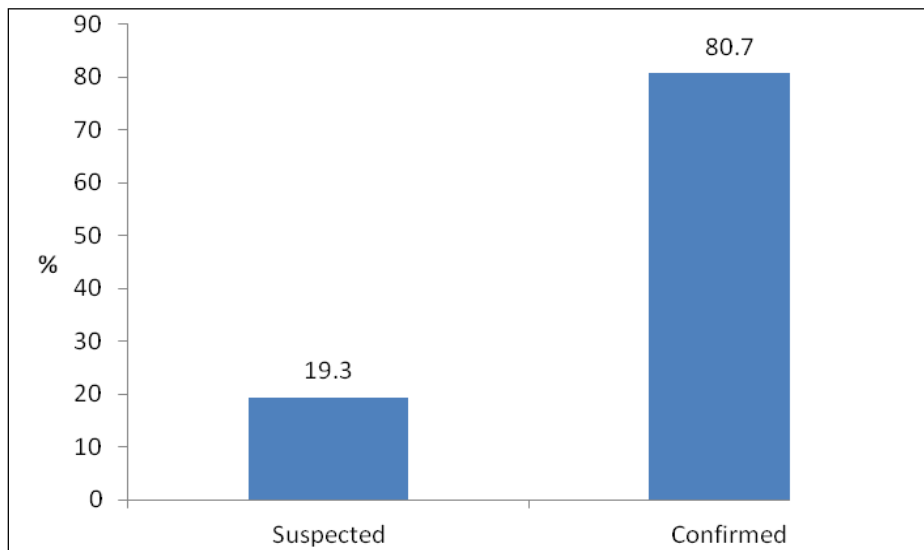


In the spread of cases according to gender and years, it is not observed a significant difference between males and females ( $p=0.7$ ).

**Table 10. The spread of cases according to the examination result**

	Suspected (no,%)	Confirmed (no,%)	Total
L visceral	63 (18.9)	270 (81.1)	333
L cutaneous	5 (25.0)	15 (75.0)	20
Total	68 (19.3)	285 (80.7)	353

**Figure 8. The result of examination**

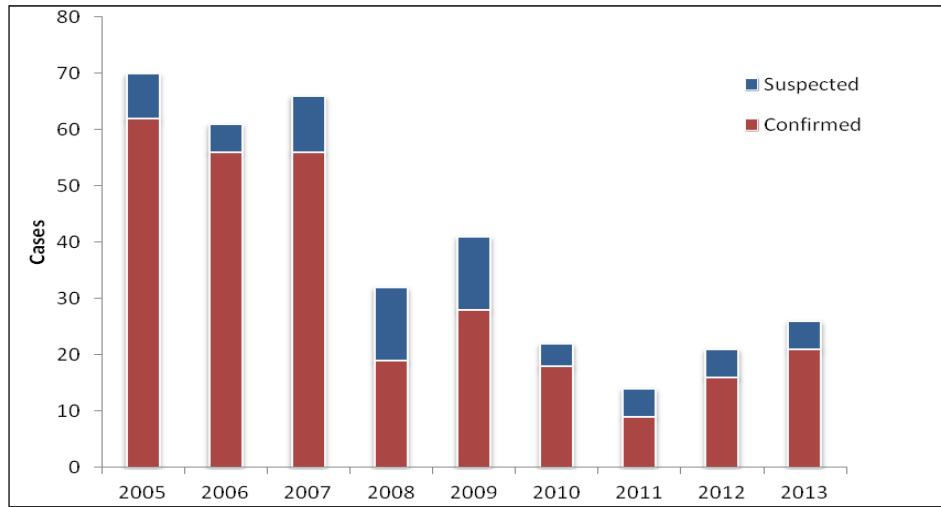


Most of the disease cases, 285 (80.7%) are confirmed compared to 68 (19.3%) suspected cases with significant difference between them,  $p > 0.05$ .

**Table 11. The examination result according to the years**

	Suspected	Confirmed
2005	8	62
2006	5	56
2007	10	56
2008	13	19
2009	13	28
2010	4	18
2011	5	9
2012	5	16
2013	5	21

**Figure 9. The result of examination by year**



It is observed that over all the years of study, were highly noticed the confirmed cases with significant difference with the suspected, not confirmed cases ( $p < 0.01$ .)

The cases in the monthly overview table 14Sh have been reported as confirmed ones in labs and suspected ones, because the lab diagnosis of Leishmaniosis is not done in all the localities of the country.

There exists an act reporting the problem, because some of the cases of the localities are directed for visits and hospitalization in UHCT.

**Table 12. The spread of visceral Leishmaniosis according to the age-group in 2005-2013**

Year	<1year	1-4	5-14	15-44	45-59	60+	Total
2005	6	37	16	5	1	2	<b>67</b>
2006	7	37	8	4	1		<b>57</b>
2007	11	30	13	4		1	<b>59</b>
2008	3	15	7	4		1	<b>30</b>
2009	4	17	8	9	1	1	<b>40</b>
2010	4	13	1	1	2		<b>21</b>
2011		7	4	1		1	<b>13</b>
2012	3	10	6	1		1	<b>21</b>
2013	7	10	4	2	1		<b>24</b>
<b>Total</b>	<b>45</b>	<b>176</b>	<b>67</b>	<b>31</b>	<b>6</b>	<b>7</b>	<b>332</b>



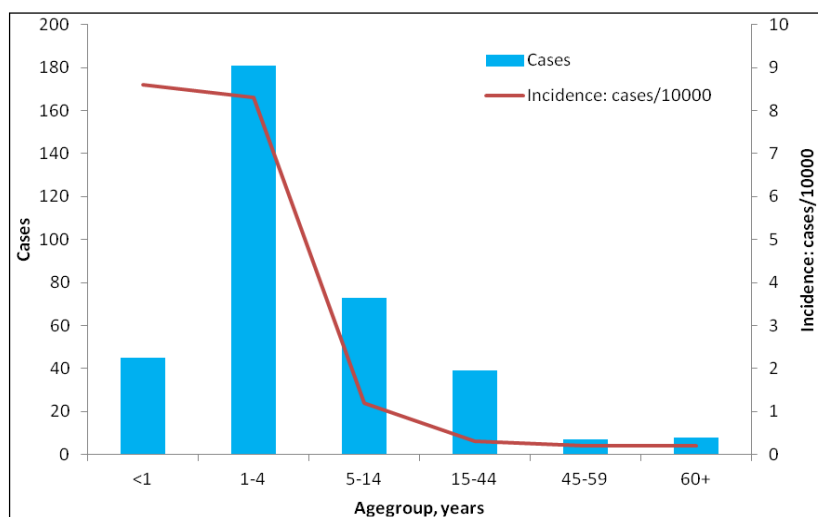
**Table 13. The spread of cutaneous Leishmaniasis according to the age - group, during the years of 2005-2013**

Year	<1year	1-4	5-14	15-44	45-59	60+	Total
2005			1	2			3
2006		2			1	1	4
2007		1	2	3			6
2008			1			1	2
2009		1					1
2010		1					1
2011			1				1
2012							
2013					2		2
<b>Total</b>		<b>5</b>	<b>5</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>20</b>

**Table 14. The spread of VL and CL according to the age- group, during the years of 2005-2013**

Year	<1year	1-4 year	5-14 vj	15-44 vj	45-59 vj	60+ year	Total
2005	6	37	17	7	1	2	70
2006	7	39	8	5	2		61
2007	11	31	16	7		1	66
2008	3	15	8	4		2	32
2009	4	18	8	9	1	1	41
2010	4	14	1	1	2		22
2011		7	5	1		1	14
2012	3	10	6	1		1	21
2013	7	10	4	4	1		26
<b>Total</b>	<b>45</b>	<b>181</b>	<b>73</b>	<b>39</b>	<b>7</b>	<b>8</b>	<b>353</b>

**Figure 10. Number of cases and incidence by age-group of VL and CL.**



It is observed that the highest incidence has been noted in the age <1 years with 8.6 cases/10000 residents, which is followed from the age-group of 1-4 years with 8.3 cases/10000 residents, and the age-groups of 5-14 years with 1.2 cases/10000 residents.

**Table 15. Hospitalization and death frequency**

	Number of cases	Percentage from total (no=353)
Hospitalization	311	88.1 %
Death	2	0.6%

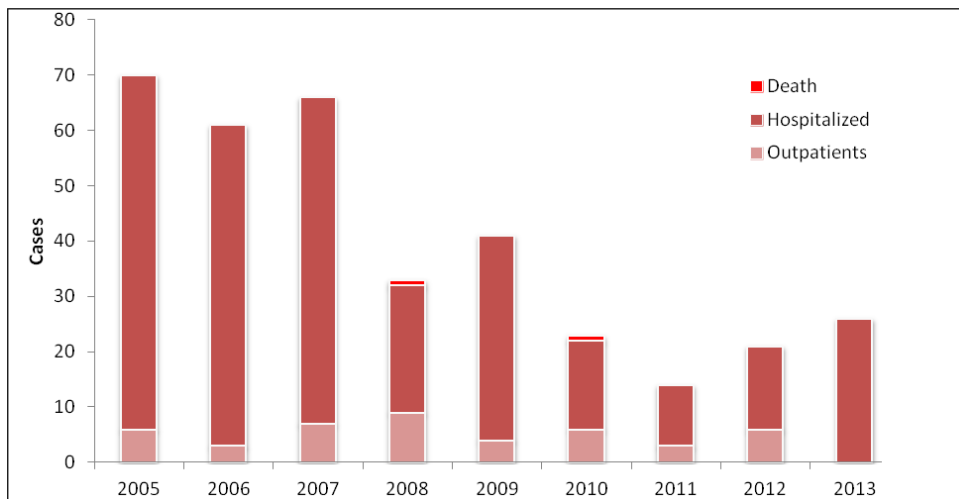
It is observed that 311 or 88.1% of patients are hospitalized.

Two patients or 0.6% of them have resulted in death 95% CI (0.2 – 2.1).

**Table 16. The hospitalization and death frequency according to years**

Year	Hospitalization, N0 (%)	Death
2005	64 (91.4)	
2006	58 (95.1)	
2007	59 (89.4)	
2008	24 (75.0)	1
2009	37 (90.2)	
2010	17 (77.3)	1
2011	11 (78.6)	
2012	15 (71.4)	
2013	26 (100)	

**Figure 11. Frequency of hospitalization and deaths by year**



It is observed that in each year have been hospitalized over 71 % of the patients. One death has occurred in the year of 2018 and another in 2010.

In conclusion, it is very important to make an early and prompt diagnosis of disease confirmation, which directs in the treatment and immediate medication, as well as into the reservoir control, in our country case of dogs, by creating a National Monitoring Plan, and it will cause the reduction of the overload of the population diseases. Also, during the reduction of this overload, an important factor is the strict Disease Surveillance covering all the districts of the country.

## **Sero-epidemiological investigation of Hydatid disease during the period of 2009-2013**

**Valbona Gjoni, Erjona Abazaj, Luljeta Alla**

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Echinococcosis or Hydatid disease is a zoonotic cosmopolitan illness of a problematic character caused from parasitic gender of *Echinococcus*. Two of the main forms of the illness in human beings are cystic echinococcosis (cystic hydatid disease) and alveolar echinococcosis. Many people get infected throughout direct contact with the definite hosts. The period of incubation lasts from some months to some years. From the known clinical manifestations of the patients, it has been reported that in 70% of these cases the right lobe of liver is infected, accompanied with severe pain, while in 15% of the cases the inferior pulmonary right lobe is infected, accompanied with breast pain, cough, temperature; even the exposure to anaphylactic shock has been recorded. In 15% of hydatid disease cases, the localization of cysts in other organs has also been recorded, such as kidneys, spleen, brain, bones, etc.

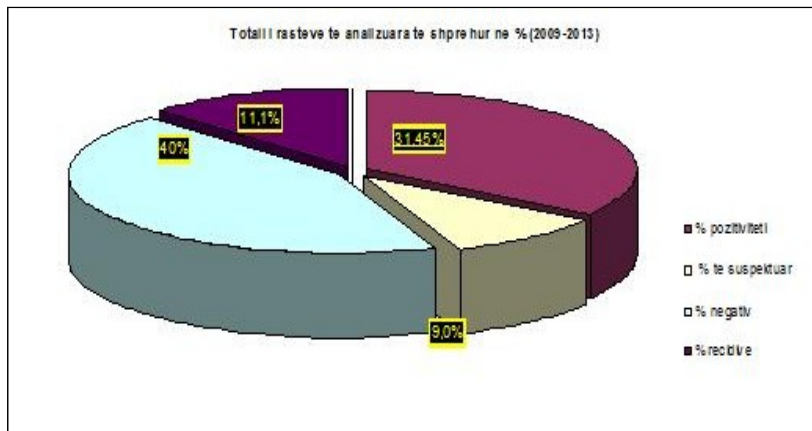
Echinococcosis is often costly and complicate in its treatment, and might require a surgical intervention and/or a prolonged drug therapy. This illness does not have a specific immune-prophylaxis and there does not exist any chemical prophylaxis. The programs of developing prohibition of echinococcoses include de-worming (dehelminatation) of dogs, the improvement of hygiene in butchery shops and the public education campaigns. More than one million people are infected from echinococcoses, more than one time in their lives. WHO has its own objective in accomplishing the effective evaluation of strategies for the control of cystic echinococcoses, until the year 2018.

This report has brought up the evaluation of results and the profitability for the real data of Hydatid disease for the professionals of the health system in Albania during the period of 2009-2013, risk factors, as well as the incidence and prevalence of the illness.

The epidemiological databases for the period of 2009-2013 have been collected from the individual report files of the cases for endemic control of zoonosis, referring to the trinomial person-place-time. The patients, who were diagnosed beforehand with imagery methods or by surgical treatment, were examined with the immune enzymes method ELISA IgG by strictly following the way of blood taking, keeping and processing in proper time. The patients with susceptible diagnose results were lead to a second control with a new serum, two weeks after the first control. For the residual cases after the transition period of 4-6 weeks, there was made again a control of the patients by sero-diagnosing again and by comparing the respective databases.

In this way, it is possible to differentiate the cases where surgical treatment or chemotherapy have had their effects in stopping the illness in organism. The estimation and evaluation of the results was made according to the basic data of the protocols of diagnosed kits that are in use. The results of the analyses were processed using Excel and Health Mapper programs. This has made possible the design of the sero-epidemic map, which has a time and geographic space orientation for our country. During the five years of 2009-2013, as a result of the examinations done in the Laboratory of parasites in IPH, were processed 658 suspected patient sera. The positivity of the cases resulted in the level of 31.4%; 11.1% of the analyzed cases were recidivists.

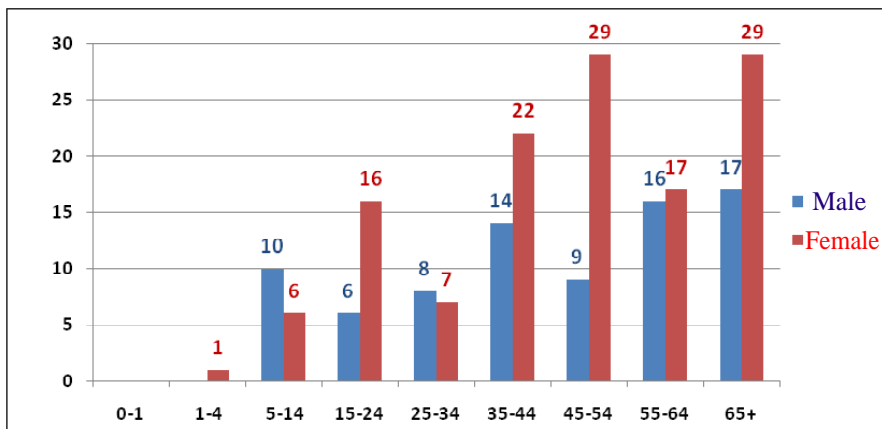
**Totali i rasteve të analizuar të shprehur në %(2009-2013)**



Relative incidence of the cases referred to this period (2009-2013), was from 4,1% (2009) to 4.7% (2013); (cases/100000 residents).

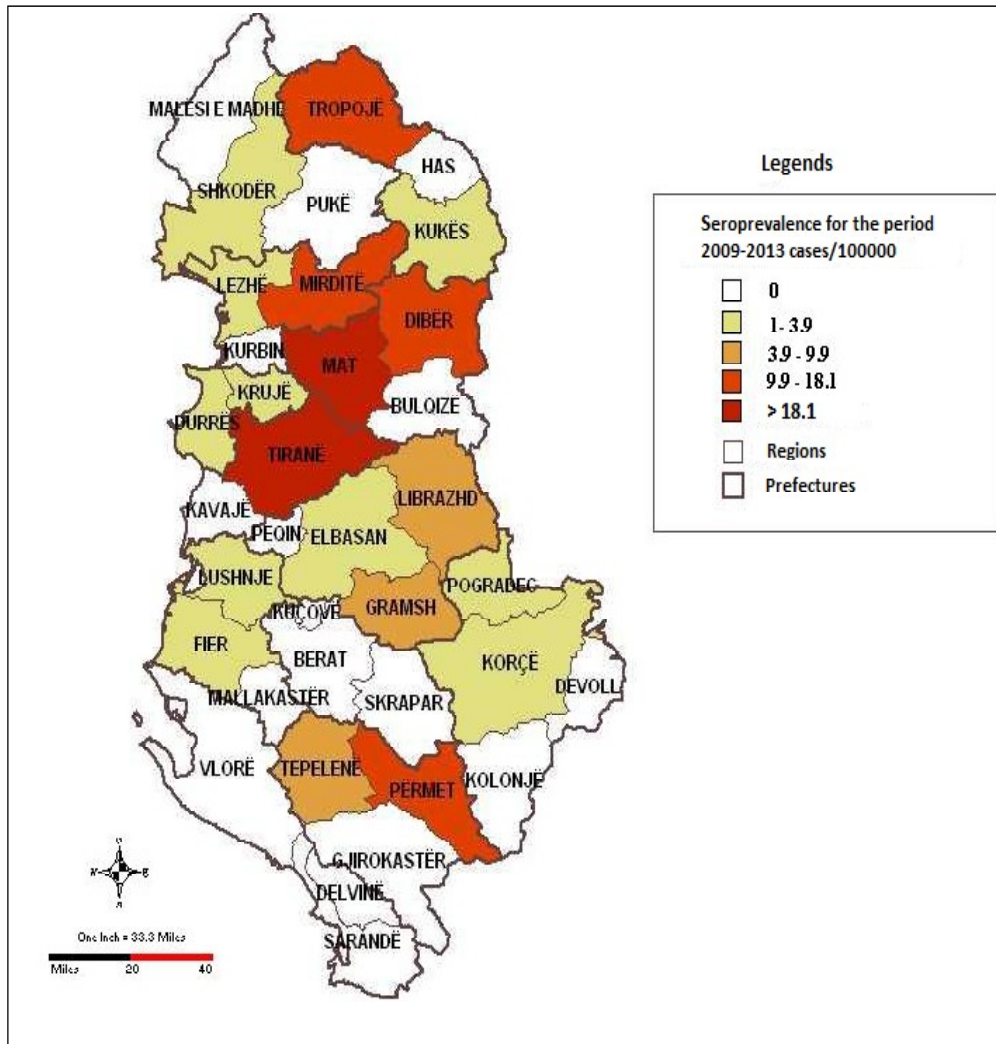
The level of infestation referred to the gender and age group, is also shown at 45-54 year olds and 65+ year olds for females, and 65+ year olds for males.

**Sero-positivity according to the age group and gender (2009-2013)**



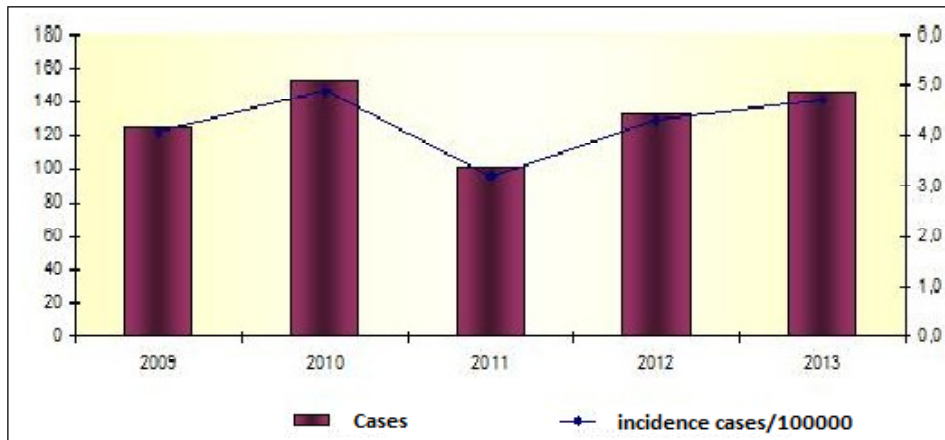
In conclusion, we can say that Hydatid disease is spread in different regions of Albania, but the most infected localities remain especially Tirana, Mati, Mirdita, Tropoja and Përmeti.

**The geographical spread and sero-prevalence of Hydatid disease for the period of 2009-2013**



The highest seroprevalence was recorded in the year 2011(44.5%).  
 Only a positive case was recorded in the age group of 1-4 years old.  
 The females result much more infected than males (61.35%).  
 The highest level of incidence was noticed in the years of 2010 and 2013.

**Frekuenca e hasjes së Hidatidozës incidencia raste/100 000 banorë për periudhën 2009-2013**



According to this period (2009-2013), the number of new cases has increased in  $\pm 22$  patients, more than those recorded in the year 2006, when the number of new cases varied to  $\pm 14$ . The most infected organs result to be the liver in 41.54 % and pulmonary organs, in 21.7% of cases. Approximately 85% of the patients are being treated. The clinically or radiologically suspected Hydatid disease cases, and the cases that were practically confirmed by ELISA test, have been completely confirmed surgically as such (100%),

However, there does not exist until nowadays any study or report of Hydatid disease spread in national level. Such a complex study should have been impossible to be carried out by only one available specialist. It must be mentioned that the collaboration of the human and veterinary medical authorities is very important, in order to control zoonoses (especially Hydatid disease as an illness of special negligence).

It is recommended in a special way the test repetition for the patients after the recommended treatments from the doctors, because the serologic techniques, accompanied with microscopy of hydrate liquids and the anatomopathology, have provided diagnostic elements in a great number of cases. Sero-negativity in recidivist patients is recommended to be observed 3-7 years after the treatment. When the therapy is functioning, an increase of IgG anti-bodies is observed 4-6 weeks after the post transitory operation period and the chemotherapy of the patients with Hydatid disease, and after that a slow decrease for 12-18 following months. If the increase of serologic values continues after this period, this might orient us towards a regeneration of the illness. The high density of the known cases in the city of Tirana is to be related to the intense migration of the population during those years, and it is presumed that the infestation might have occurred in their earlier habitations. The last WHO reports emphasize the importance that should be given to the control through an effective active surveillance national system, so that to identify the differences of illness incidence, to the purpose of establishing adequate strategic directions for its control and prevention.

## Hepatitis C Genotypes in Albania.

**Lila Shundi, Brunilda Villa, Silvia Bino**

Department of Infectious Disease Control and Epidemiology

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Hepatitis C is a major public health problem worldwide. In Albania, the prevalence of HCV infection in the population, varies from 0.9 - 1%, and among risk groups it varies from 28-33%. Until 2005, HCV diagnosis and studies in Albania, based on immunological screening methods, such as Enzyme Immuno Assay (EIA), Enzyme-Linked Immunosorbent Assay (ELISA), Recombinant Immunoblot Assay (RIBA), etc., were insufficient to supplement the laboratory algorithm and epidemiological studies on hepatitis C. In 2006, at the Institute of Public Health (IPH), Laboratory of Molecular Biology (LMB), was established, and its main objectives were the development of molecular methodologies of research, diagnosis and molecular epidemiology related to HCV, in order to increase the performance of quality monitoring and control of this infection. In the period 2008-2010, LMB conducted its first study of the molecular epidemiology in Albania to identify HCV circulating genotypes in the country and to assess the relative frequency and changes in the distribution of HCV genotypes, depending on the mode of transmission, age and its correlations with clinical features in certain risk groups, thus fulfilling the gap in information about this area. HCV genotypes are important epidemiological biomarkers, and may affect the sensitivity and specificity of diagnostic methods for detection of HCV. Due to geographical agglomeration of certain genotypes, genotype identification may serve as a useful tool to detect the source of an outbreak of HCV in a given population. HCV genotype combination with other biomarkers, such as quantitative assessment of HCV's RNA, can be useful in the management of hepatitis C in the selection of candidates for antiviral therapy. Thus, genotype is pivotal in determining therapy. Initially it has very important prognostic significance in predicting the chances for a successful response of the patient to a particular therapy (patients with genotype 2 and 3 respond better to treatment with antiviral drugs than those with genotype 1), and along with viral load values, becomes an important factor in determining the duration of treatment.

Molecular methods used in IPH for HCV genotyping are: HCV Genotype Assay (LIPA, Bayer) and HCV Linear Array (Roche). In Albania are identified four main genotypes (1, 2, 3, 4) and their subtypes (1a, 1b, 2a / c, 3a, 4a, 4c, 4e). Demographic and viral characteristics, as well as genotypes of all studied groups are presented in Table 1.

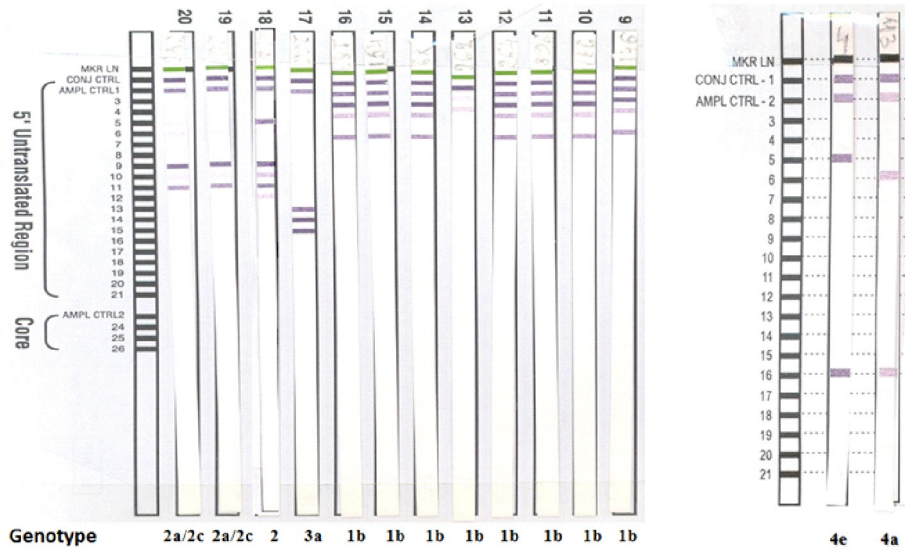


**Table 1: Demographic characteristics, viral ones, and genotypes of the studied population.**

<b>Variable</b>	<b>Patients with hepatologic problems</b>	<b>Patients with Beta-thalassemia major</b>	<b>Dialysis Patients</b>
<b>Nr.</b>	160	22	33
Rate men/women	1:1	1:1	2:1
Average age (years)	45	18	46
Age-group (years)	16-73	5-27	22-68
The average level of HCV RNA (IU / ml)	936,000	1,265,000	531,000
<b>Genotypes (%)</b>			
1 (1a, 1b, 1a/1b)	57	77	97
2 (2a, 2a/2c)	35	4.5	-
3 (3a)	4	-	-
4 (4a, 4c, 4e)	4	18.5	3

Genotype 1 (subtype 1b) is dominant in Albania (65.6%), among all groups and patients who are infected with HCV infection through blood transfusion or other parenteral exposures. Genotype 2 (subtype 2a / 2c), second in prevalence (26%) is most common in the general population and the group of patients with hepatological problems. In recent years has been identified in Albania, as in neighboring countries, genotype 4 (5.6%), usually present in Egypt and Central Africa. Genotype 3 (2.8%) dominates among the drug users. Regarding patients who underwent antiviral therapy, those with genotype 2 had a better response (95%) to interferon therapy than patients with genotype 1 (44%). In LMB conducted studies, it results that the spread of HCV infection in the Albanian population is primarily nosocomial and through blood transfusion and its derivatives. An important study objective about hepatitis C in Albania remains the identification of circulating types in dialysis centers, as well as their epidemiological relationships.

Figure 1: Models of HCV typing in Albania.



## Infant Mortality Rate and Neonatal Mortality Rate and the Gender Balance in births, according to population structure, gender and regions for year-2013.

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Infant Mortality Rate (IMR) in Albania for the year-2013 is 7.2/1000 live births. This indicator is shown by the Ministry of Health and INSTAT, by taking into account the hospitals and the offices of civil services as the source data. This indicator would be better reported in the case of a better cooperation among the reporting entities.

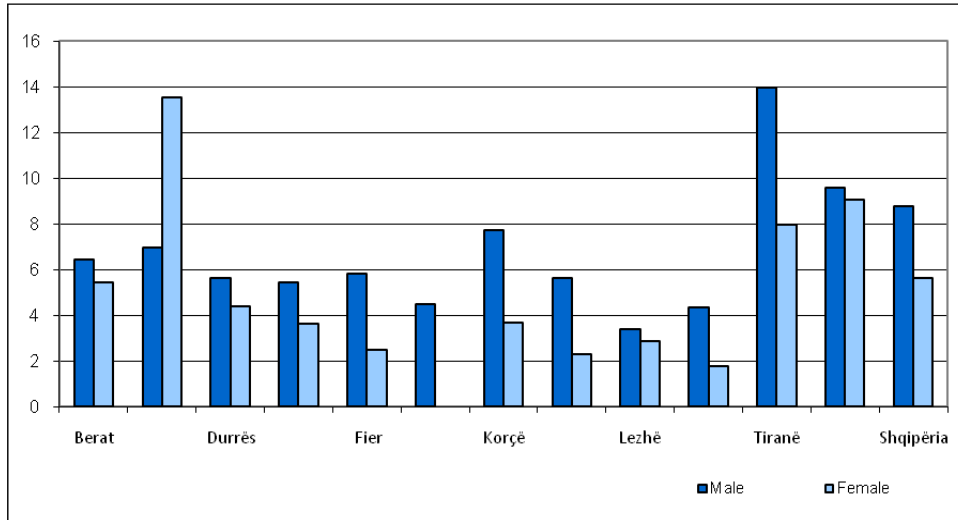
**Table 1. Mortality of 0-1 and 1-4 years old according to regions in the country for 2013**

	Mort 0-1		Mort 1-4	
Regions	Male	Female	Male	Female
Berat	6.5	5.4	1.6	3.6
Dibër	7.0	13.5	2.8	3.0
Durrës	5.6	4.4	0.6	0.0
Elbasan	5.4	3.6	0.6	0.6
Fier	5.8	2.5	1.7	2.5
Gjirokastrë	4.5	0.0	0.0	0.0
Korçë	7.7	3.7	1.0	0.0
Kukës	5.6	2.3	0.0	4.5
Lezhë	3.4	2.8	0.0	0.0
Shkodër	4.3	1.8	1.7	0.9
Tiranë	14.0	7.9	1.8	0.5
Vlorë	9.6	9.0	2.1	1.1
Albania	8.8	5.6	1.4	1.0

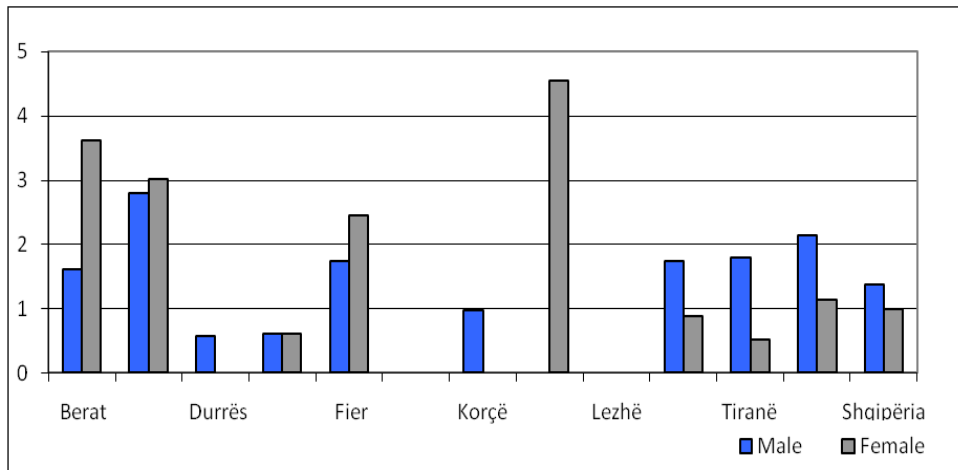
In the table above it is noted that Dibra, Tirana and Vlora are the regions with the highest infant mortality rate, and males show a higher mortality rate with respect to the gender.

Table data is separately presented from the graphs below, according to gender, covering the infant mortality rate and neonatal mortality rate for all 12 regions of the country for the year 2013.

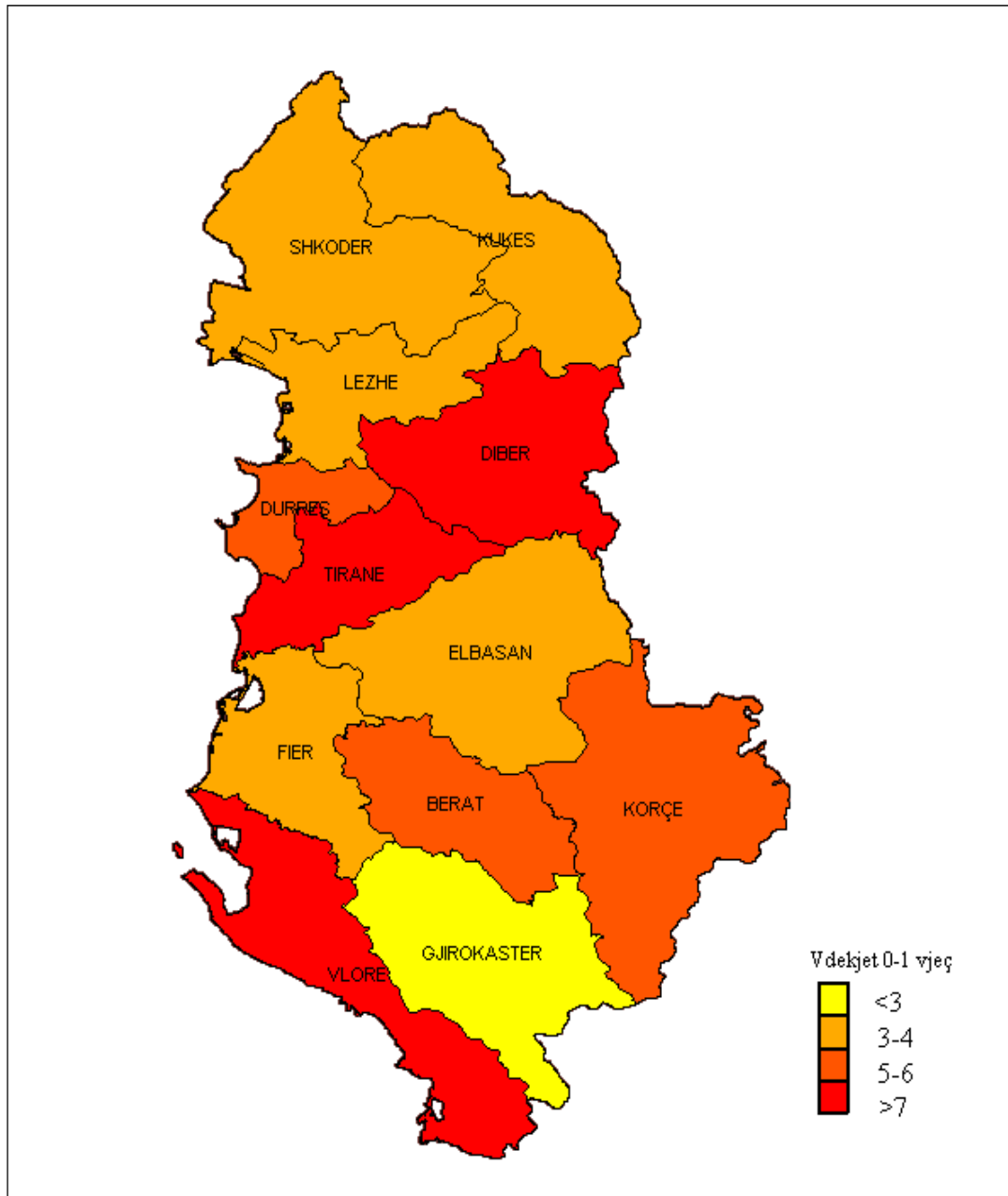
**Graph 1. Infant Mortality Rate according to gender for the year 2013**



**Graph 2. Neonatal Mortality Rate according to gender for the year 2013**



**Geographic distribution of infant mortality rate according to regions for the year 2013,**



Gender balance by birth is 106 and according to group-age 101.1. This indicator displays a decreasing trend after the age of 70. A clear explanation is obvious in the table below.

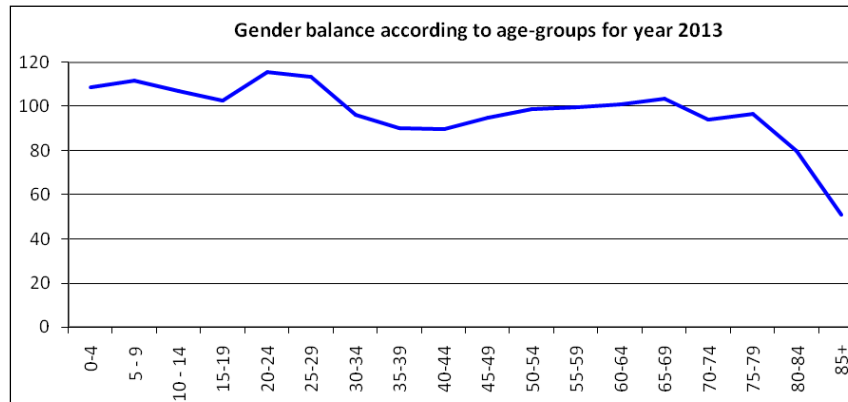
**Table 2. Gender Balance in birth (m/f)**

<b>Regions</b>	<b>Gender Balance (m/F)</b>
Berat	112.1
Dibër	107.8
Durrës	110.6
Elbasan	100.7
Fier	105.9
Gjirokastrë	103.7
Korçë	95.4
Kukës	120.9
Lezhë	126.9
Shkodër	101.1
Tiranë	106.3
Vlorë	106.0
Albania	106.5

**Table 3. Gender Balance according to age-groups for the year 2013**

<b>Age-Groups</b>	<b>Gender Balance</b>
0-4	108.7
5 - 9	111.6
10 - 14	107.1
15-19	102.5
20-24	115.5
25-29	113.6
30-34	96.2
35-39	90.1
40-44	90.0
45-49	95.0
50-54	98.7
55-59	99.7
60-64	101.1
65-69	103.3
70-74	94.3
75-79	96.6
80-84	79.8
85+	50.9
Albania	101.1

**Graph 3. Gender balance according to age-groups for the year 2013**



Population report under 15-years old vs. total population is decreasing, and is higher in males than females, but the report for the 65+ years old age-group is higher in females than in males.

The mortality in males in this age-group is higher, but in INSTAT publications for the year 2013, we can only find data for total mortality.

**Table 4. Rates in percentage of specific age-groups for population of the year 2013**

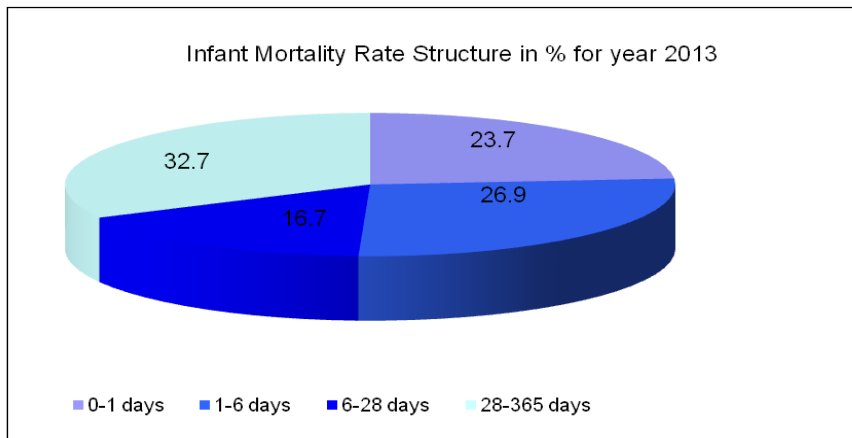
Age-Group	Male	Female
0-14	20.6	19.1
65+	11.1	12.2
15-64	68.3	68.7
0-14 / 15-64	30.2	27.9
65+ / 15-64	16.2	17.8

**Table 5. Neonatal Mortality Rate according to regions for the year 2013**

Regions	Neonatal Mortality
Berat	5.1
Diber	2.2
Durres	5.4
Elbasan	3.0
Fier	3.9
Gjirokaster	2.3
Korce	3.2
Kukes	2.8
Lezhe	0.6
Shkoder	2.6
Tirane	7.0
Vlore	7.4
<b>Total</b>	<b>4.9</b>

Neonatal Mortality Rate accounts for 67.3% of infant mortality, therefore health care needs to be more intensive and continuous during this period. To make comparisons according to gender, we would need the data for both males and females alike.

**Graph 4. Specific weight of infant mortality rate according to age-group**





# The characteristics of consumption of some psychotropic medicaments in the elders of city of Tirana

Dr. Alban Ylli

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Psychotropic medicament is a natural or a synthetic substance that reaching the central nervous system can cause qualitative and/or quantitative changes. During the absorption in the organism, the psycho-tropes affect not only the central nervous system, but also the other organs. Therefore the psycho-tropes might cause effects in the brain, as well as in the peripheral nervous system. The psychotropic medications are the most consumed medications by the elders, and moreover, these medications are used both inappropriately and more frequently by this population group.

The consumption of the psychotropic medications in order to improve the health situation of the elders has turned into a case with high consequences in public health.

This study gives us information over the level and consumption characteristics of psycho-tropes in elders of 65-74 years old, of the city of Tirana, in comparison to four different populations that have been involved in the international study of elderly mobility (International Mobility in Aging Study – IMIAS).

The data have been taken from the first phase of the study of IMIAS (International Mobility in Aging Study) in five cities, which was done during the period September-December of 2012. In the study have been involved individuals of 65 to 74 years old, which live in communities of Kingston (Ontario, Canada), Saint Hyacinth (Quebec, Canada), Tirana (Albania), Manizales (Colombia) and Natal (Brazil). Identical procedures and measuring utilities have been used in the five cities where the study was developed. IMIAS has taken the approval from the Board of Ethics of each country and has respected the regulations of ethics of the persons involved in the study. Some individuals have been disqualified from the study, those who used to make 4 or more than 4 mistakes in the primary questionnaire of orientation (Leganes Cognitive Test –LCT), which is a test of dementia evaluation for populations of low education level.

*The samples involved in the study:*

- a) Tirana with about 750,000 residents. In Tirana, the study of IMIAS involved 394 individuals (188 men and 206 women), who were randomly chosen and were invited through the central health registers.

- b) Kingston is a city of 110000 residents in Canada. These individuals (398 total, 186 men and 212 women) were involved in the study through giving an answer to a letter that was sent to them by their family doctor.
- c) Saint-Hyacinthe is a small French-speaking town in Canada with around 50000 residents. The recruitment of 401 individuals (191 men and 210 women) was done like in Kingston.
- d) Manizales, in Colombia is a city with approximately 450000 residents. In total 400 individuals (198 men and 202 women) were involved in the study in a randomly selection from the public health centers.
- e) Natal, in Brazil has 402 elders (192 men and 210 women), who were chosen randomly and where got involved in this study 5 health centers in 5 neighborhoods of the city.

*The variables taken into account in this study*

**The consumption of psycho-tropes from men and women at the age of 65-74 years old.**

The interviewed individuals, were asked if they were actually taking any medication? If yes, they were invited to show the names of the used medications, as well as by verifying the medication boxes. Only the psychotropic medications have been taken into account in our study. These medicaments were classified as analgesics / anti – epileptics / anti – Parkinson (N02, N03, N04) in anxiolytics and sedatives / hypnotic (N05B, N05C) and against depression (N06A). The interviewed individuals have been asked for the medications, which have been taken with a prescription or without a prescription from the doctor.

Depression: In the study we used the Scale of Depression from the Center of Epidemiological Studies measured with 20 points (CES-D), aiming at the evaluation of the depression symptoms during the prior week. The results are measured in scores and the possible result derived and was scored in the range of 0-60 points. We have defined the depression in this study, as having a CES-D of equal or greater than 16, which is a sign of a possible diagnose of depression, or of the high depression risk.

The descriptive analysis was used for the surveillance of the data, to show the percentage of psychotropic consumption (according to the classes, gender and according to the way how the psychotropic medicaments were taken) and the percentage of depression present according to gender and cities. This data processing study reported interesting results related to the consumption of psychotropic medications in the elders of the city of Tirana.

According to Table 1, the consumption level of psychotropics in the city of Tirana is the same for all men and women (exactly 29.8 and 30.1). In comparison to the other cities that were included in the study, the men in the city of Tirana have a higher consumption level in comparison with the other cities, whereas, the level of consumption of women of Tirana is lower than in Quebec and it is the same as in Ontario and Manizales.

**Table 1. The consumption of psychotropics according to the population and gender**

The kind of psychotropic used			anxiolytic/sedative/hypnotic	Anti-depressants	analgesic	At least one psychotropic
	<i>m</i>	<i>n</i>				
<b>Natal (Brazil)</b>	<i>m</i>	<i>n=192</i>	1.6	0.5	2.6	3.6
	<i>f</i>	<i>n=210</i>	3.3	4.8	8.6	14.8
<b>Manizales (Colombia)</b>	<i>m</i>	<i>n=198</i>	1.0	7.1	11.6	19.2
	<i>f</i>	<i>n=202</i>	0.0	6.4	24.3	29.1
<b>Tirana (Albania)</b>	<i>m</i>	<i>n=188</i>	5.3	1.6	23.9	29.8
	<i>f</i>	<i>n=206</i>	7.8	0.5	24.3	30.1
<b>St Hyacinth. Quebec Canada</b>	<i>m</i>	<i>n=191</i>	8.4	4.7	12	22.5
	<i>f</i>	<i>n=210</i>	12.4	15.7	21.0	38.1
<b>Kingston (Ontario Canada)</b>	<i>m</i>	<i>n=186</i>	5.4	13.4	9.7	23.7
	<i>f</i>	<i>n=212</i>	6.6	17.0	12.3	30.2

Analgesics take the largest part of the consumed psychotropes in Albania by men, as well as by women, which is comparable to the Latin American countries, whereas in Kingston the most consumed psychotropics are the anti-depressants.

The women that live in Tirana report a high percentage of the consumed anxiolytics, around 7.8% compared to the men but also even with the women of other countries, excluding here St. Hyacinth in Canada with a percentage of 12.4%.

On the contrary, for the consumption of anti-depressants by men and women of 65-74, who live in the city of Tirana have been reported the lowest levels of consumption (excluding here men that live in Natal of Brazil).

**Table 2. Levels of depression according to the cities included in the study (in %)**

The cities included in the study	Natal (Brazil)		Manizales (Colombia)		Tirana (Albania)		St Hyacinth (Quebec)		Kingston (Ontario)	
	<i>m</i>	<i>f</i>	<i>m</i>	<i>f</i>	<i>m</i>	<i>f</i>	<i>m</i>	<i>f</i>	<i>m</i>	<i>f</i>
<b>Depression (CES-D &gt;16 points)</b>	6.8	37	20.2	31.7	29.8	47.6	38.7	37.6	8.1	12.3

In Table 2 above are shown the percentages of the risk for depression according to populations. In the city of Tirana, the highest level of risk for depression is among women. In the Albanian population was identified the highest percentage of risk for women, and it was around 47.6% ,while among men the percentage was higher in St Hyacinth in Canada (with around 38.7%).

In Table 3 is shown the way of taking psychotropic medications with a prescription or without a prescription according to the populations participating in the study (in %).

**Table 3. The level of consumption of psycho-tropes (in %) according to the cities and the way of their purchasing (with prescription/without prescription).**

The kind of psychotropic		anxiolytics/ sedative/ hypnotic	Anti- depressants	analgesic	At least one psycho- trope
City	Prescri ption				
<b>Natal (Brazil)</b>	<i>with</i>	2.2	2.7	5.2	9
	<i>without</i>	0.2	0	0.5	0.7
<b>Manizales (Colombia)</b>	<i>with</i>	0.5	6.8	17.5	23.8
	<i>without</i>	0	0	1.3	1.8
<b>Tirana (Albania)</b>	<i>with</i>	3.8	0.8	1.5	6.9
	<i>without</i>	2.8	0.3	23.1	25.1
<b>St Hyacinth (Quebec Canada)</b>	<i>with</i>	10.2	10.5	14	28.9
	<i>without</i>	0.2	0.2	3.7	4.2
<b>Kingston (Ontario Canada)</b>	<i>with</i>	6	15.3	10.1	26.4
	<i>without</i>	0	0	1.5	1.5

In conclusion we can say, that in a constant way, for men and women of 65 to 74 years old, the percentage of psychotropic medications which were taken without prescriptions was higher in the Albanian population than in the populations of other countries that were involved in this study. This was more emphasized for analgesic medicaments; almost always the analgesics are taken without prescriptions and about half of anxiolytics are taken without a prescription as well. Even in the case of anti-depressants that are taken very rarely from the Albanian elders, around 25% of the cases take those medications without a prescription.

In Albania it is identified a higher percentage of the consumption of psycho-tropes compared to the cities of Latin America, and it is comparable with the consumption of the cities in Canada. In the largest part, the psychotropics are analgesics and in the least, are anti-depressants.

In Tirana, in comparison to the other cities, almost all the analgesic medication cases, practically in almost half of anxiolytics cases and in a considerable percentage also the anti-depressants, are used without a prescription from the general doctor or the specialist. One of the reasons of changing the method of receiving the psychotropics must be the different method of organizing the purchasing or the reimbursement method of the medications in the countries included in this study.

Despite of the fact of a high depression percentage in population groups, compared to other countries, the level of anti-depressants used (such as with prescription or without prescription) in Tirana, is much lower compared to this kind of consumption level in the other countries of Latin America or Canada. A more specific analysis is required for this situation, in order to find the reason of the lower level of consumption of anti-depressants amidst the population of around 65 to 74 years old.

## **The basic control of alcohol and smoking: Screening test for the consumption of alcohol and smoking.**

**Roland Shuperka, Aulona Zotaj**

The Sector of Substance-Abuse of Smoking and Alcohol.

The Department of Health Promotion. Institute of Public Health in Albania.

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The purpose of this test is to identify the individuals that consume alcohol & smoke, as well as to provide the necessary effective intervention.

This test is created to be used in the primary health care, where the injuries and the aftermath effects of alcohol & smoking consumption, might pass without being noticed.

The screening test (the risk evaluation of alcohol & smoke) is a questionnaire with 7 questions for the alcoholic part and 6 questions for the smoking one. It is designed to be administered from one health worker, who fills out with a pen on a form-sheet, which requires 5-7 minutes to be administered. This questionnaire is created to obtain information related to alcohol & smoke and determines the damage level from the consumption. After the evaluation, health workers start to discuss with the citizen on the alcohol & smoking consumption.

The score is characterized with a “low,” “moderate” or “high” risk level. Referring to the test score, it is defined whether “there is no need for treatment,” “there are short interventions given” or “they should be referred to a specialist for treatment.”

The test might identify a number of problems related to alcohol & smoking consumption, including here the acute intoxication in alcohol, as well as the regular consumption and dependence on it, etc. This test gives the level of risk that relates to the alcohol & smoking consumption from the citizen’s part, as well as the information details whether the consumption is harmful or will cause harm in the future, in the case those will continue to be consumed in the same way.

The score evaluation is made by collecting the points of all the citizen’s answers.

### **1. Test completion and the connection with short interventions**

There have been used many instruments and techniques for the composition of the questionnaire: It is defined as a test which is quickly administered, compared to the existing tests used for the diagnose of the consumed substances; It is a test which distinguishes the consumption of alcohol &

smoke; It is a test, which is used in the institutions of primary health care; It is a test that might be simply interpreted and the needed intervention might be determined.

The short interventions have proved to be effective and have been much more valuable in the management of the problematic alcoholic individuals, by filling the vacuum between the efforts of the preventative intervention and the intensive treatment of the individuals with serious disorders because of the alcoholic abuse. The short interventions are also effective to ease the heavy dependant alcohol cases for a more specialized treatment.

The short intervention is used to improve the health of the population and that of the patients' groups, as well as that of the individuals. When the systematic testing program starts, the approach on the intervention short system shows the way how health workers might use short interventions to respond to three risk levels: heavy alcohol drinking; harmful alcohol drinking, alcohol & smoking dependence.

of short interventions, as part of an effective method on health promotion and prevention of diseases in community. A lot of smokers might change their behavior of smoking, throughout short consultations with professionals of primary healthcare. The others need the outside support, which might be offered from specialized clinics for quitting smoking.

## **2. The reasons for screening of alcoholic and smoking consumption.**

The consumption of alcohol and smoking is a heavy burden for the public health in the entire world. The consumption of alcohol & smoking and the risks that accompany their consumption, continuously indicate the rise of the risk level, by starting from the level with a lower risk (with non-problematic cases or consumption,) in moderate risk level (regular consumption,) till the highest risk level (frequent high risk consumption.) The users with a high risk level or with dependence are easily identified from doctors. Meanwhile, it is certain that the alcohol & smoking consumption that create dependence, is related to the considerable burden of the illness. Also, the consumers that are not addicts are a heavy burden for the health system, because damages might be much bigger than those consumers that have a dependence on alcohol & smoking. Therefore, the questionnaire is especially projected to identify and intervene in people, who are using substances in a harmful way that might be the beginning of the self-harm, including here the risk of advancing to dependence. The main aim of screening is to discover the health problems or factors with high risk, in an early-stage, before the serious illnesses or other problems appear. This questionnaire should be part of health care practice environments to maintain preventative activities.

Criteria for Screening:

### **The screening procedure ought to provide:**

- an important influence in health and well-being of individuals and community;
- an acceptable screening and intervention for individuals that are known-positives for this test.
- early-stage identification accompanied with interventions, which gives much better test-results than late-stage treatment;
- an adequate test in disposition of citizens, which is acceptable from their part.

### **3. Who can use the test?**

The test is designed to be used by workers of primary health care. The workers of primary health care have especially the possibility of identifying the general life-style of the patients, as part of their routine work during the health care service they provide, and thus they are a reliable source of information.

### **4. Which citizens should be screened?**

This test can be used in many ways to evaluate the alcohol & smoking consumption by citizens. In an ideal world, all the patients of primary health care must be screened every year for the consumption of substances, as part of the promotional health programs. In the case when the health worker screens only those citizens, who he thinks have problems with the consumption of substances, he might fail to cover all the citizens that have caused self-harm from the consumption of these substances.

### **5. The problems related to the consumption of substances**

This is the first identifying test that includes alcohol & smoking, and might offer help for the health care workers in identifying the risk level of their patients' consumption. It is important to mention that the harms, which come from alcohol & smoking consumption, cause heavy health problems; social problems for the family, society, law, work, school or individual finances.

### **6. Specific health problems**

Health workers that administer the questionnaire and that give short interventions must be aware of the frequent consequences caused from alcohol & smoking consumption. The alcohol & smoking consumption is a risk factor for a great number of health problems and it causes many illnesses, incapability and death. Social problems are also related to the alcohol dependence and they include the destruction of family and friendship relations, as well as the difficulty in the process of study and/or work. For some people (male over 45-years old and women that have passed menopause), the alcohol consumption in small doses has resulted positive in health, especially in heart disease reduction in the studies that were made in high revenue countries. When we mention low doses of alcohol, we can understand the average consumption of 10g of alcohol per day for males and less than 10g of alcohol per day for females (one glass of beer contains 13g alcohol, 100 ml wine has approximately 9.5g alcohol, 35 ml strong alcoholic drink with 40 % alcohol contains 11 g alcohol). The women who consume alcohol during their pregnancy are in danger to have babies with birth defects, retarded children in learning and other ways of behavior, as well as children with late mind-formation. The tolerance and the dependence towards alcohol & smoking are developed as a result of the regular consumption of them. The alcohol consumers, who have created dependence, might suffer the symptoms of dependence withdrawal if they reduce or stop consuming alcohol. The symptoms of dependence include shivering, sweating, anxiety, nausea, vomiting, diarrhea, sleeping disorders, headache, hypertension, hallucinations and convulsions.

The risk related to the problems of alcohol over the allowed norms includes:

Drunkenness, aggressive and violent manners of behavior, accidents and damages, nausea and vomiting; reduction of sexual performance and early aging, digestion problems, ulcers, pancreas inflammations and high-blood pressure; anxiety and depression, difficulties in social relations, financial

problems even at work; difficulties in memorization and in problem-solving; birth defects and brain damages in babies who are born from pregnant alcoholic women; temporary brain damages that result in memory loss, cognitive deficiency and orientation problems; stroke, muscle and neural damages; liver and pancreas illnesses; mouth, lung and breast cancer; and suicide.

### **Smoking products**

Consumption of smoking products is a concerning problem for public health and one of the main causes of many deaths in the world. The consumption of smoking products is a risk factor for a great number of health problems and increases the risk of other health complications, such as the high blood pressure, diabetes and asthma. The children exposed to cigarette smoking have a higher risk of health problems such as respiratory infections, allergies, and asthma. Pregnant women that smoke cigarettes are in a greater risk of abortion, premature baby birth or to give birth to babies with low-body weight. Also, the cigarette smoke exposure increases the risk of health problems even to people who do not smoke.

The risks which are related to consumption of smoking products include:

Early aging and wrinkles of the skin; reduced physical activity and more time for the body to regenerate after a cold or influenza; respiratory infections or asthma; high blood pressure and diabetes; abortions, premature babies and babies of low weight; liver disease; chronic lung disease; heart disease, stroke and vascular illnesses; esophagus, mouth, throat, lung and breast cancer.

The questionnaire must be administered only with or combined to the other questionnaires, as part of an interview on health, as a questionnaire of a life-style or as part of a medical history.

The citizens react in a good way and give exact answers related to the consumption of alcohol & smoking, when the health worker convinces the citizens that he is listening carefully to them. He ought to be friendly, not prejudging or judging the answers; he will show feelings and empathy in front of the citizen; he will provide information about the aim of questionnaire results; he will explain carefully the reasons of asking for alcohol consumption; and at last he will tell the citizen that he will keep the confidentiality of his answers.

### **The interpretation of questionnaire score**

The questionnaire indicates the risk points for each used substance, so as to initiate a discussion (a short introduction) with the citizens about substance consumption. The answers for each substance might be of “low” risk category, “moderate” or “high” risk category. These risk categories indicate the necessary intervention the citizen ought to undergo (‘without treatment,’ ‘short intervention’ or ‘the reference to the specialist and treatment’.)

### **Low risk**

The citizens with ‘three or less than three’ smoking points and (10 or less than 10 alcoholic points) in the questionnaire have a low risk for the problems related to their substance consumptions. Even when they randomly use substances, they do not feel any problems related to the substance consumption and they are of a low risk of future problems , if they continue to use the same consumption doses.



**Moderate risk**

The citizens with smoking points ‘between 4 and 26’ and (‘11 and 26’ for alcoholic points) are of a moderate risk for health and other problems. They might be experiencing actually some problems. The continuation of substance consumption in these doses might create in the future many health problems and other problems in them, including here, even the possibility to create dependence. The risk increases for those that in the past times have had a history with problems and substance dependency.

**High risk**

The collection of points ‘27 or more’ for the citizen of any of the substances (smoke & alcohol), puts this citizen in a very high risk of dependency from this substance and there exists a big possibility, that he might suffer health, social, financial, law problems and problems in relations with others.

**7. The choice of treatment, supported in test points**

The final report chart is filled out in the end of the interview and in the end of the questionnaire completion. It is used to give conclusions to the citizen about the level of risk for substance consumption.

**Low risk**

The citizens with low risk should take treatment as usual and there might be discussed the test conclusions and points if the time permits. The citizens with low risk or that abstain in substance consumption, should be encouraged to continue their behavior in this way.

**Moderate risk**

The citizens with moderate risk have a necessity to take a short intervention of 3-15 minutes. The short intervention gives to the clients the conclusions of the test by using the report conclusion chart and simple motivation techniques. The short interventions have been effective especially in the reduction of the quantity of substance consumption by the citizen.

**High risk**

The short interventions should be given also to the citizens with high risk. A small intervention cannot be an accomplished treatment in itself for the high risk users. The short intervention might be used in this context also to encourage the citizens to contact the specialist for special help related with the substance consumption. This help might be given from a specialist, who is involved in the primary health care institution or for the specialized treatment in HUCT (for alcohol.)

The program implementation of screening and short interventions aims at an effective management of the staff, and includes four main aspects: planning, treatment, monitoring, and conclusions. In Appendix A, we are showing the questionnaire that we used for the evaluation of smoke and alcohol consumption in community.

**Appendix A.**

**The screening test for Smoke & Alcohol consumption**

The name of health worker _____ Health Center _____ Locality _____  The number of the client or Name _____ Date _____ Gender M – F; Age: The collected points
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**Presentation (please read this to the citizen or adjust according to the culture of your community)**

The questions below are intended to collect information about the experience of alcohol consumption, smoking products during one’s life and the substances in the three last months. These substances might be smoked, drunk, and inhaled (show the answer chart.) You must be assured that this information is confidential. You should answer the questionnaire chart, before you ask the client.

QUESTION 1  During your life, which from these substances have you used?		
a) Smoking products (cigarettes, chewing smoke, ect)	No	Yes
b) Alcoholic drinks (beers, wine, alcoholic drinks, ect)	No	Yes
If all the answers are negative: “You have not tasted even when you were in school?” If the answer is “No” in all the answers, stop the interview. If the answer is “Yes” in any of the answers, ask P2 for each of the substances used at any time		

QUESTION 2  In the last three months, how often have you used the above mentioned substances.	Never	Once or twice	Every month	Every week	Every day or almost every day
a) Smoking Products (cigarettes, chewing smoke, ect)	0	2	3	4	6
b) Alcoholic drinks (beers, wine, alcoholic drinks, ect)	0	2	3	4	6
If all the answers for P2 are “never”, go to question 6. If one of the substances is used in the last three months, continue with answers 3,4 for every used substance and question 5 for alcoholic drinks.					

QUESTION 3  During the last three months, how often have you had a strong desire to use substances?	Never	Once or twice	Every month	Every week	Every day or almost every day
a) Smoking products (cigarettes, chewing smoke, ect)	0	3	4	5	6
b) Alcoholic drinks (beers, wine, alcoholic drinks, ect)	0	3	4	5	6

QUESTION 4  During the last three months, how often have you been had health, social, law or financial problems as a result of the substance consumption?	Never	Once or twice	Every month	Every week	Every day or almost every day
a) Smoking products (cigarettes, chewing smoke, ect)	0	4	5	6	7
b) Alcoholic drinks (beer, wine, alcoholic drinks, ect)	0	4	5	6	7

QUESTION 5  During the last three months, how often have you failed in making activities that normaly you should have made because of alcoholic consumption?	Never	Once or twice	Every month	Every week	Every day or almost every
a) Smoking products (cigarettes, chewing smoke, ect)					
b) Alcoholic drinks (beers, wine, alcoholic drinks, ect)	0	5	6	7	8

QUESTION 6  Is there any concern from your relative or friend about your consumption of smoke & alcohol?	No, Never	Yes, in the last three months	Yes, but not in the last three
a) Smoking Products (cigarettes, chewing smoke, ect)	0	6	3
b) Alcoholic drinks (beers, wine, alcoholic drinks, ect)	0	6	3

QUESTION 7  Have you ever tried to reduce the quantity or to give up the substance consumption, but you have failed?	No, Never	Yes, in the last three months	Yes, but not in the last three months
a) Smoking products (cigarettes, chewing smoke, ect)	0	6	3
b) Alcoholic drinks (beers, wine, alcoholic drinks, ect)	0	6	3

## Comparison of the abortion indicator for the years 2009-2013

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Around 6638 abortions have been reported in total for the year 2013, and that is 1208 less cases than in preceding 2012. The number of the collected files in IPH from all the reported centers is 4447, representing 67% of the abortion reports, those accompanied with abortion files. A more detailed presentation of births and abortions in Albania is provided by the table below:

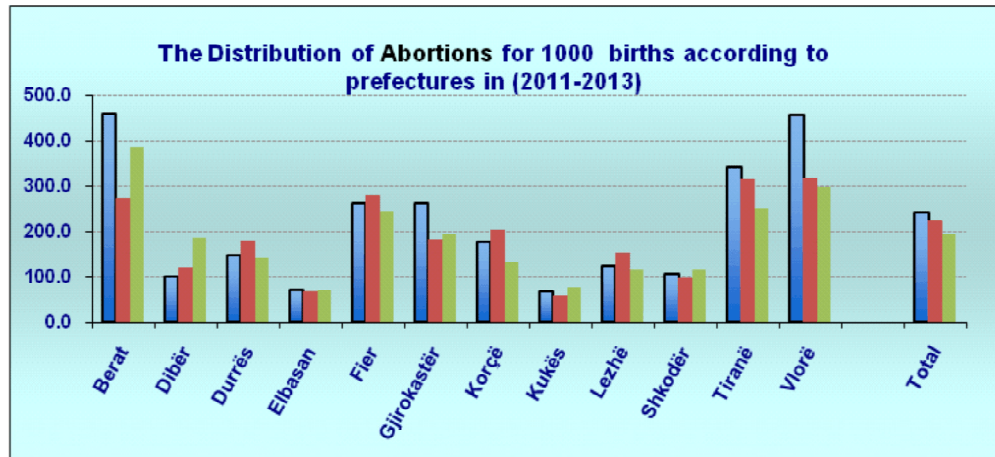
**Table 1 – Number of births and abortions in Albania (2009-2013)**

	Year				
	2009	2010	2011	2012	2013
Births	34.044	33.856	34.297	34.974	33.994
Abortions (number)	9.200	8085	8307	7846	6638
Abortions					
–for 1000 live births	270,2	238,8	242,2	224,3	195,3
The Relation:					
Births / Abortions	3,7 : 1	4,2 : 1	4,1 : 1	4,5 : 1	5,1 : 1

*Notice: The databases over the total birth number have been consulted from Ministry of Health*

The above table shows the decrease of birth numbers has brought the decrease of the number of total abortions. The rate births/abortions has reached the number of 5, 1:1, which means that in our country approximately for 5 births we have one abortion.

**Graph 1. Abortions for 1000 live births according to the prefectures for the period of 2011-2013**



The abortion proportion (abortions for 1000 live births) has decreased in country scale, (195,3 for the year 2013 compared with 242,2 that has been in year 2011). Among the prefectures with the most high proportion of abortions for y. 2013 we can mention Berat (385, 1), Vlora (296,8), then Tirana with (248,6) and Fieri with (244, 6), notwithstanding the absolute number of cases, it is higher in the prefecture of Tirana with 2908 accomplished abortions.

**Table 2. The Percentage of executed abortions according to the kind of abortion**

The kind of abortion (in percentage)	y.2009	y.2010	y.2011	y.2012	y.2013
Pregnancy interruption	51,9	40	36,5	34,4	32,8
Spontaneous Abortion	48,1	60	63,5	65,6	67,2

**Table 3. Percentage of abortions according to the woman's age-group**

Gr-age	y.2009	y.2010	y.2011	y.2012	y.2013
14 – 19 years old	4,7	5,1	5,1	4,1	6,1
20- 34 years old	65,5	65,2	65,8	66,7	69,1
Over 35 years old	29,1	25,1	29,1	28,2	24,8
Without Declaration	0,6	4,6	0	1,0	0

**Table 5. Percentage of abortions according to woman education level.**

Habitation	y.2009	y.2010	y.2011	y.2012	y.2013
Urban	67,9	68,6	64,9	65,1	61,2
Rural	32,1	31,4	35,03	34,9	38,8

**Table 4. Percentage of abortions according to woman habitation**

Education level of wife	y.2009	y.2010	y.2011	y.2012	y.2013
First Grade	2,6	2,3	2,3	2,8	3,2
8- year olds	45,5	43,7	47,4	45,9	50,1
Middle Schooling	36,3	36,8	35,8	34,9	31,7
University Level	14,8	15,6	13,5	14,8	13,7
Without Declaration	0,8	1,6	1,0	1,6	1,3

**Table 6. Percentage of abortions according to the woman employment.**

employment	y.2009	y.2010	y.2011	y.2012	y.2013
employed	21,6	22,2	18,0	19,0	16,3
Out of work	78,1	77,4	81,2	80,8	83,1

**Table 7. Percentage of abortions according to woman health insurance**

Health insurance of woman	y.2009	y.2010	y.2011	y.2012	y.2013
Insured	19,5	20,1	16,5	19,8	21,2
uninsured	80,3	79,4	83,0	80,1	78,4

**Table 8. Percentage of abortions according to woman marital status**

Years					
	Single	Married	Separated	Widow	Missing
y.2009	6,2	92,5	0,8	0,0	0,4
y.2010	7,0	92,0	0,8	0,0	0,2
y.2011	4,7	93,8	0,7	0,1	0,7
y.2012	6,2	93,0	0,8	0,1	0,0
y.2013	6,3	92,8	0,6	0,1	0,2

Midis grave që kanë kryer abort në vitin 2013, 28,4% e tyre nuk kanë patur lindje të gjalla më parë; 23,8% kanë patur një lindje të gjallë dhe 32,7% e tyre kanë patur 2 lindje të gjalla.

Midis grave që kanë kryer abort në vitin 2013, 28,4% e tyre nuk kanë aktualisht fëmijë, 23,7% e tyre kanë nga 1 fëmijë, 32,8% kanë 2 fëmijë dhe 3,5% kanë 4 fëmijë apo më tepër.

Në 2013, 84,1% e aborteve janë nga gra të cilat nuk kishin kryer ndërprerje më parë (aborte me kërkesë), 8,5% janë nga gra që kanë kryer 1 ndërprerje të mëparshme dhe 3,7% janë nga gra me 2 ndërprerje të mëparshme.

Në 2013, 90,6% e aborteve janë kryer nga gra të cilat nuk kishin patur aborte spontane më parë, 5,6% janë kryer nga gra që kanë patur 1 abort spontan të mëparshëm dhe 1,4% janë kryer nga gra të cilat kanë patur 2 aborte spontane të mëparshme.

Ndër arsyet e ndërprerjes së shtatzënisë, rreth 31,3% deklarohen me kërkesë të gruas dhe 51,6% për arsye shëndetësore të gruas.

Rreth 80% e aborteve kryhen brenda tremestrit të parë të shtatzënisë (më pak se 12 javë). Në vitin 2013, 8% e aborteve kryhen në 12-14 javë shtatzënie dhe 9,7% mbi moshën 15 javëshe të shtatzënisë. Ndërkohë që për shtatzënitë mbi 22 javë abortet e kryera zënë një shifër prej 2,6%.

Teknika kryesore për kryerjen e abortit në vitin 2013, në 49,4% të rasteve është dilatacion dhe kyretazh dhe në 36,2% të rasteve dilatacion dhe aspirim.

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