STUDY REPORT SUMMARY

ASTRAZENECA PHARMACEUTICALS

FINISHED PRODUCT: None
ACTIVE INGREDIENT: None

Study No: NIS-CEU-DUM-2008/1 (NCT00882336)
Epidemiological study of European Cardiovascular Risk patients: Disease prevention and management in usual daily practice (EURIKA)

Developmental Phase: Epidemiological Study
Study Completion Date: 23 Oct 2009

Date of Report: 31 Aug 2010

OBJECTIVES:

The overall objective of the EURIKA study is to assess how CV risk factors are managed in daily clinical practice and to identify areas of potential improvement in primary prevention in a number of European countries. The study will be comprised of two phases: (I) cross-sectional study and (II) epidemiological model.

Primary objective

To describe the Management and Control of classical, emergent and psycho-social CV risk factors and the use of CV risk assessment by physicians.

Secondary objectives

- To identify barriers to estimating and using global cardiovascular risk scores in clinical practice: physician perception, guidelines implementation in daily clinical practice, patient education, and implemented cost-containment measures.
- To evaluate the correlation between traditional cardiovascular risk factors and emergent biomarkers (Apo-A1, Apo-B, hs-CRP)
- To apply EURIKA study data into the NHANES III (35) epidemiological model to estimate the attributable risk for coronary heart disease mortality among patients with CV risk factors

METHODS:

This was a multicentre, multinational, cross sectional study designed to obtain a representative picture of clinical practice by country and to allow comparisons between countries in Europe. For that reason a core protocol was comprised, with the main objective of addressing a common methodology and a minimum set of common data that should ensure comparability.

Physicians enrolled the defined number of patients as they attended the office/clinic, in a random manner (using a specific list of random numbers that was provided to the investigators at the beginning of the study). In addition, to ensure that there was no selection of patients with excessive risk levels, physicians were provided with a checklist to apply to every eligible patient.

Physicians were asked to keep a patient enrolment log for all patients asked to participate in the study.

In addition, a fasting blood sample was obtained on that visit (if the patient is in fasting conditions). The blood sample was sent to a Central Laboratory for assessment of the specific parameters required as per protocol. Results were sent to the physicians for their records and were automatically transferred from the Central Laboratory database to the study database. All the material for blood sample involved in obtainment and shipment was provided to the physicians.

The blood samples have been stored and will be kept for a maximum of 5 years in order to be able to explore emerging new CV risk factors which currently have no documented evidence about their relation with regards to the development of CV disease. If such a relationship is found and documented in due course, that information will be passed to the physicians and institutions in an appropriate fashion.

Patient population selection criteria

Patients ≥ 50 years old with at least one additional CV risk factor (with no previous CV event or hospitalization for a CV event) from Primary Care or hospital outpatient clinic.

Inclusion Criteria: subjects fulfilled all of the following criteria:
1. Provided with informed consent

2. Females or males aged ≥50 years

3. Primary care or hospital outpatient clinic having at least one of the following CV risk factors:

   3.1. Subjects were considered to have dyslipidaemia if they were currently receiving lipid lowering drugs and/or LDL-C ≥ 4.10 mmol/L (160 mg/dL), and/or HDL-C <1.036 mmol/L (40 mg/dL) in men and <1.30 mmol/L (50 mg/dL) in women, and/or triglycerides ≥ 1.70 mmol/L (150 mg/dL).

   3.2. Subjects were considered hypertensive if they were taking antihypertensive medications, and/or if their systolic pressure is ≥ 140 mmHg or diastolic pressure is ≥ 90 mmHg.

   3.3. Subjects were considered to be in the smoking group if they were current, former or ever smokers (100 cigarettes in their life).

   3.4. Subjects were considered to have diabetes if they report current usage of antidiabetic medications (insulin and oral medications) and/or if their fasting plasma glucose is ≥ 7.0 mmol/L (126 mg/dL).

3.5. Obesity was defined as body mass index (BMI) ≥ 30 kg/m^2 and/or waist circumference ≥ 102 cm in men and ≥ 88 cm in women.

Exclusion Criteria

1. Subjects who were unwilling or unable to provide informed consent.
2. Current participation in a clinical trial
3. Previous CV disease, event or hospitalization for a CV event

Physician's population

Physicians were selected to represent current practitioners in primary care centers or outpatient clinics involved in CVD prevention in each country. To determine the proportion of practitioners in each medical specialty invited to participate, we followed the advice of key practicing physicians in each country who were interviewed about local characteristics of the health care system and the participation of each type of medical specialist in CVD prevention. Based on their responses, the proportion of physicians in each specialty varies across countries, although family physicians working at the primary care level predominate in all countries.

Rosters of practicing physicians in each country were obtained from the OneKey database, a large database containing information on the characteristics of practicing physicians (Table 1, Table 3) (http://www.cegedim.com/corporate/cegedim_eng/cegedimdendrite.htm). This database was used to select a random sample of physicians stratified by age, sex and specialty, including family medicine and other medical specialties involved in CVD risk factor control, such as cardiology, internal medicine, and endocrinology. Physician sex and age strata are proportional to their distribution in the OneKey database.

RESULTS: Descriptive Analysis: In this document we have summarized representative descriptive tables of the study results including overall results and figures of each participating country.

Table 1. Demographics and baseline characteristics of physicians.

	TOTAL N=806	AUS N=62	BEL N=77	FRA N=55	GER N=66	GRE N=63	NOR N=57	SPA N=69	SWE N=57	SWI N=71	TUR N=67	UK N=69	RUS N=93
Age (Years) Mean (SD)	47.3 (9.6)	50.3 (9.0)	46.0 (8.9)	52.5 (9.0)	51.7 (8.4)	45.2 (8.1)	44.3 (10.6)	47.3 (7.7)	54.8 (7.9)	49.3 (8.7)	40.7 (8.6)	46.2 (7.1)	43.2 (11.1)
Male N (%)	511 (63.4)	40 (64.5)	56 (72.7)	37 (67.3)	48 (72.7)	41 (65.1)	39 (68.4)	37 (53.6)	42 (73.7)	55 (77.5)	55 (82.1)	48 (69.6)	13 (14.0)
Female N (%)	295 (36.6)	22 (35.5)	21 (27.3)	18 (32.7)	18 (27.3)	22 (34.9)	18 (31.6)	32 (46.4)	15 (26.3)	16 (22.5)	12 (17.9)	21 (30.4)	80 (86.0)
Years since graduation Mean (SD)	20.4 (9.3)	21.1 (10.3)	19.4 (8.2)	23.1 (9.1)	23.5 (8.9)	19.3 (7.5)	15.9 (10.8)	21.9 (7.4)	24.1 (8.3)	21.2 (9.0)	15.4 (8.8)	21.6 (7.1)	19.2 (11.2)
GPs N %	514 63.8%	51 82.3%	64 83.1%	47 85.5%	34 1.5%	7 11.1%	52 91.2%	47 68.1%	44 77.2%	50 70.4%	45 67.2%	69 100%	4 4.3%
Internal Medicine N %	147 18.2%	7 11.3%	0 0.0%	0 0.0%	21 31.8%	38 60.3%	0 0.0%	8 11.6%	2 3.5%	14 19.7%	10 14.9%	0 0.0%	47 50.5%
Cardiology N %	94 11.7%	2 3.2%	9 11.7%	3 5.5%	7 10.6%	13 20.6%	1 1.8%	6 8.7%	6 10.5%	4 5.6%	6 9.0%	0 0.0%	37 39.8%
Diabetes Endocrinology N %	24 3.0%	0 0.0%	1 1.3%	4 7.3%	1 1.5%	5 7.9%	0 0.0%	5 7.2%	4 7.0%	1 1.4%	0 0.0%	0 0.0%	3 3.2%
Other N %	27 3.3%	2 3.2%	3 3.9%	1 1.8%	3 4.5%	0 0.0%	4 7.0%	3 4.3%	1 1.8%	2 2.8%	6 9.0%	0 0.0%	2 2.2%
Main work N %													
Primary Care Clinic	261 32.5%	1 1.7%	5 6.5%	0 0.0%	1 1.5%	0 0.0%	35 61.4%	35 51.5%	32 56.1%	7 9.9%	36 53.7%	68 98.6%	41 44.1%
Hospital	140 17.5%	9 15.0%	8 10.4%	4 7.3%	4 6.2%	13 20.6%	1 1.8%	18 26.5%	6 10.5%	3 4.2%	22 32.8%	0 0.0%	52 55.9%
Private	401 50.0%	50 83.3%	64 83.1%	51 92.7%	60 92.3%	50 79.4%	21 36.8%	15 22.1%	19 33.3%	61 85.9%	9 13.4%	1 1.4%	0 0.0%
Place main work setting N % — Urban	525 65.2%	38 61.3%	30 39.0%	30 55.6%	48 72.7%	55 87.3%	28 49.1%	50 72.5%	41 71.9%	36 50.7%	51 76.1%	32 46.4%	86 92.5%
Sub-urban	121 15.0%	3 4.8%	20 26.0%	6 11.1%	7 10.6%	7 11.1%	16 28.1%	4 5.8%	12 21.1%	16 22.5%	4 6.0%	19 27.5%	7 7.5%
Rural	159 19.8%	21 33.9%	27 35.1%	18 33.3%	11 16.7%	1 1.6%	13 22.8%	15 21.7%	4 7.0%	19 26.8%	12 17.9%	18 26.1%	0 0.0%
Nº physicians at work place N % — <5	374 46.5%	38 61.3%	45 58.4%	22 40.0%	45 68.2%	48 76.2%	38 66.7%	18 26.1%	20 35.1%	37 52.1%	29 43.3%	30 43.5%	4 4.3%
5-9	142 17.6%	8 12.9%	10 13.0%	6 10.9%	8 12.1%	1 1.6%	14 24.6%	15 21.7%	19 33.3%	13 18.3%	12 17.9%	26 37.7%	10 10.9%
10-19	127 15.8%	8 12.9%	12 15.6%	8 14.5%	6 9.1%	2 3.2%	3 5.3%	20 29.0%	16 28.1%	10 14.1%	7 10.4%	11 15.9%	24 26.1%
>=20	162 20.1%	8 12.9%	10 13.0%	19 34.5%	7 10.6%	12 19.0%	2 3.5%	16 23.2%	2 3.5%	11 15.5%	19 28.4%	2 2.9%	54 58.7%
Nº of patients attended per week — <50	125 15.5%	11 17.7%	8 10.4%	1 1.8%	1 1.5%	9 14.3%	6 10.5%	7 10.1%	8 14.0%	9 12.7%	6 9.0%	1 1.4%	58 62.4%
50-99	278 34.5%	10 16.1%	36 46.8%	22 40.0%	12 18.2%	29 46.0%	32 56.1%	15 21.7%	42 73.7%	34 47.9%	12 17.9%	13 18.8%	21 22.6%
100-199	256 31.8%	9 14.5%	29 37.7%	27 49.1%	28 42.4%	15 23.8%	17 29.8%	28 40.6%	7 12.3%	24 33.8%	13 19.4%	46 66.7%	13 14.0%
>=200	147 18.2%	32 51.6%	4 5.2%	5 9.1%	25 37.9%	10 15.9%	2 3.5%	19 27.5%	0 0.0%	4 5.6%	36 53.7%	9 13.0%	1 1.1%

The analysis included 806 participating physicians who complete the "physician's questionnaire" and included at least one evaluable patient in the study. The overall average age of physicians was 47. 3 years, ranged from 40.7 years in Turkey to 54.8 years in Sweden. Most of the physicians were male (63.4%). 63.8% were general practitioner/family physicians. The variable "number of patients attended per week" follows a normal distribution; centers receiving more patients per week were in Austria, Turkey and Germany.

Table 2. Demographic and baseline characteristics of patients.

Demographics	TOTAL N= 7641	AUS N= 624	BEL N= 638	FRA N= 593	GER N= 678	GRE N= 620	NOR N= 611	SPA N= 642	SWE N= 628	SWI N= 667	TUR N= 663	UK N= 673	RUS N= 604
Age, mean±SD	63.2±8.9	61.9±8.6	64.6±8.9	64.1±8.8	65.3±8.8	65.3±8.9	62.9±8.9	58.3±7.3	63.1±9.0	64.9±8.6	65.2±9.9	59.4±7.6	62.9±8.5
<65 years N %	4519 (59.1)	402 (64.4)	342 (53.6)	329 (55.5)	309 (45.6)	380 (61.3)	371 (61.1)	383 (59.7)	324 (51.6)	325 (48.7)	511 (77.1)	349 (51.9)	492 (81.5)
≥65 years N%	3122 (40.9)	222 (35.6)	296 (46.4)	264 (44.5)	369 (54.4)	240 (38.7)	238 (38.9)	259 (40.3)	304 (48.4)	342 (51.3)	152 (22.9)	324 (48.1)	112 (18.5)
Men N%	3696 (48.4)	297 (47.6)	312 (48.9)	325 (54.8)	333 (49.1)	285 (46.0)	298 (48.8)	330 (51.4)	315 (50.2)	352 (52.8)	313 (47.2)	344 (51.1)	192 (31.8)
Women N%	3945 (51.6)	327 (52.4)	326 (51.1)	268 (45.2)	345 (50.9)	335 (54.0)	313 (51.2)	312 (48.6)	313(49.8)	315 (47.2)	350 (52.8)	329 (48.9)	412 (68.2)
BMI* Mean (SD)	28.8 (5.0)	28.6 (4.86)	28.5(5.1)	28.1 (5.2)	29.0(4.9)	28.8(4.7)	28.1(4.8)	28.7(4.6)	28.0(4.8)	28.5(5.2)	30.2(5.2)	28.9(5.3)	29.6(5.1)
Waist *Mean (SD)	99.5 (14.0)	101.0 (13.9)	98.9 (14.6)	98.0(14.0)	102.1(15)	98.5(13.0)	99.6(13.1)	98.4(13.1)	98.9(14.0)	99.9(14.3)	102.3(12.7)	99.8(14.1)	96.0(14.0)
Hip* Mean (SD)	106.2 (12.4)	106.3 (11.7)	105.7(12.3)	104.1(12.0)	108.0(12.5)	104.7(14.0)	105.2(12.0)	104.3(10.9)	105.6(10.8)	104.5(11.9)	109.8(12.9)	107.5(13.9)	108.4 (12.5)
SBP (mmHg)* Mean (SD)	135.1 (16.6)	135.3 (17.5)	132.6(14.5)	133.5(13.2)	135.4(17.1)	129.8 (14.4)	136.8(16.2)	163.0(17.2)	140.0(17.2)	136.2(16.0)	134.5(19.3)	136.3(15.9)	136.5(17.5)
DBP (mmHg)√ Mean (SD)	80.1 (9.94)	82.9 (9.7)	78.7 (8.3)	77.9 (8.9)	80.7 (9.5)	79.9 (8.8)	82.3(9.8)	95.8(9.6)	82.3(9.7)	81.5(10.0)	82.4 (11.6)	79.1(9.9)	84.3 (10.2)
Physical activity													
No N %	1489 (19.5)	101	188	194	78	190	100	144	37	135	181	65	76
Only light*	3782 (49.6)	333	308	227	333	267	309	296	316	333	333	398*	329
Heavy activity**	1232 (15.1)	102	82	89	129	82	125	88	136	117	63	108	111
Heavy activity ¥	1026 (12.2)	75	59	80	107	77	71	108	136	74	62	91	86
Alcohol U/week Mean (SD)	5.7 (11.3)	5.9 (10.0)	7.6(12.6)	7.1(13.8)	6.4 (11.8)	4.4 (10.3)	3.6 (5.1)	6.7(13.1)	4.6 (8.2)	8.5 (13.8)	4.2(18.0)	6.6(11.01)	1.8(3.9)

√ Systolic blood pressure (SBP). Diastolic blood pressure (DBP). * Physical examination performed during the visit. * Only light physical activity most weeks **Heavy activity1 -2 times a week (causing shortness of breath, increased heart rate and respiration) ¥ heavy activity 3 times or more per week for at least 20 minutes (54).

The study sample included 7641 participating patients who were included in the study with mandatory information in the CRF. The overall average age was 63.2, ranging from 58.3 in Spain to 65.3 in Greece. There was a similar proportion of male and female (48.4% vs 51.6%). At inclusion, patients BMI mean was 28.8 Kg/m2 (ranged from 28.1 in Norway to 30.2 in Turkey) and waist circumference mean was 99.5 cm. The overall systolic blood pressure was 135.1 mmHg it ranged from 129.8 in Greece to 163.0 in Spain and the overall levels (mean value) of diastolic blood pressure ranged from 77.9 mmHg in France to 95.8 mmHg in Spain. Most patients (49.6%) practiced only light physical activity and a 19.5% did not perform any type of physical activity.

Table 3. Socio-demographic and clinical characteristics of patients in the EURIKA study, by country, presented as a percentage (%).

	AUS N = 624	BEL N = 638	FRA N = 593	GER N = 678	GRE N = 620	NOR N = 611	RUS N = 604	SPA N = 642	SWE N = 628	SWI N = 667	TUR N = 663	UK N = 673	TOTAL N = 7641
Age, mean±SD	61.9±8.6	64.6±8.9	64.1±8.8	65.3±8.8	65.3±8.9	62.9±8.5	58.3±7.3	63.1±9.0	64.9±8.6	65.2±9.9	59.4±7.6	65.0±8.9	63.2±8.9
Men, %	47.6	48.9	54.8	49.1	46.0	48.8	31.8	51.4	50.2	52.8	47.2	51.1	**48.4**
*Smoking, %	50.4	39.8	43.5	47.9	51.6	63.0	40.6	41.7	51.0	49.9	46.9	53.7	**48.4**
Current smokers, %	23.8	16.2	16.5	16.5	33.9	28.1	25.2	17.2	16.9	21.5	23.7	16.4	**21.3**
Former smokers, %	26.6	23.6	27.0	31.3	17.7	34.9	15.4	24.5	34.0	28.4	23.2	37.2	**27.1**
*Hypertension, %	71.6	70.2	73.2	81.0	66.6	69.7	80.5	67.8	82.2	71.2	66.5	72.7	**72.7**
*Dyslipidaemia, %	59.0	68.0	56.7	59.6	72.6	54.8	50.5	67.3	49.8	59.1	34.5	60.5	**57.7**
*Diabetes mellitus, %	23.4	27.1	24.3	37.8	28.4	23.2	15.7	28.3	26.1	30.7	31.7	22.7	**26.8**
*Obesity, %	50.7	49.5	36.7	49.0	50.2	36.8	56.6	40.2	37.5	45.3	36.2	35.5	**43.5**
Physical inactivity, %	16.5	29.5	32.9	12.1	30.8	16.5	12.6	22.6	5.9	20.5	28.3	9.8	**19.8**
Light physical activity, %	54.5	48.3	38.5	51.5	43.3	51.1	54.6	46.5	50.6	50.5	52.1	60.1	**50.2**
No formal/primary education(%)	70.7	32.4	37.9	82.8	39.2	37.6	1.5	59.7	36.6	62.0	64.4	10.6	**45.0**
Living alone, (%)	22.6	20.5	25.0	21.6	15.6	27.0	12.2	10.9	25.2	23.5	4.5	21.5	**19.1**
High cardiovascular disease risk, %	43.1	31.2	29.5	57.1	27.3	51.5	29.0	29.1	57.3	36.9	33.6	53.8	**40.1**

AUS: Austria. BEL: Belgium. FRA: France. GER: Germany. GRE: Greece. NOR: Norway. RUS: Russia. SPA: Spain. SWE: Sweden. SWI: Switzerland. TUR: Turkey. UK: United Kingdom. SD: standard deviation. A 10-year risk of CVD death ≥5% was regarded as high CVD risk. Calculation of SCORE risk was based on the following data: age, sex, systolic blood pressure and total cholesterol values at the study visit, and smoking status. We used the equation developed for low-risk regions for patients in Belgium, France, Greece, Spain, and Switzerland, and the equation for high-risk regions for patients in Austria, Germany, Norway, Russia, Sweden, Turkey, and the United Kingdom. ***Definition of CV risk factors**: Medical diagnoses extracted from medical records or/and currently receiving treatment.

45% of participating patients did not have formal education. Moreover, 21.3% are current smokers, 72.7% had been diagnosed for hypertension, 57.7% had been diagnosed for dyslipidaemia, 26.8% had been diagnosed for diabetes, and a 43.5% of patients were obese. In this primary prevention population there are 40.1% of patients at high risk for a cardiovascular disease event.

Table 4. Physicians' management of CV risk factors: attitude

		TOTAL N=806	AUS N=62	BEL N=77	FRA N=55	GER N=66	GRE N=63	NOR N=57	SPA N=69	SWE N=57	SWI N=71	TUR N=67	UK N=69	RUS N=93
Nº of readings for last BP determination	1	**186 23.3%**	23 7.1%	23 0.3%	9 16.7%	38 57.6%	8 12.7%	3 5.4%	22 32.4%	14 25.0%	17 24.6%	13 19.7%	13 19.1%	3 3.2%
	≥ 2	**611 76.7%**	39 2.9%	53 69.7%	45 83.3%	28 42.4%	55 87.3%	53 94.6%	46 67.6%	42 75.0%	52 75.4%	53 80.3%	55 80.9%	90 96.8%
Determinations (Nº) for cholesterolemia	1	**232 29.1%**	18 9.0%	13 7.1%	12 22.2%	19 28.8%	13 20.6%	16 28.1%	11 16.2%	22 40.0%	11 15.9%	21 31.8%	39 57.4%	37 39.8%
	≥ 2	**565 70.9%**	44 71.0%	63 2.9%	42 77.8%	47 71.2%	50 79.4%	41 71.9%	57 83.8%	33 60.0%	58 84.1%	45 68.2%	29 42.6%	56 60.2%
Calculation of the total CV risk	No	**244 30.7%**	20 2.3%	16 1.1%	27 50.9%	30 45.5%	13 20.6%	22 39.3%	22 32.4%	21 37.5%	26 37.7%	34 51.5%	9 13.2%	4 4.3%
	Yes	**552 69.3%**	42 7.7%	60 8.9%	26 49.1%	36 54.5%	50 79.4%	34 60.7%	46 67.6%	35 62.5%	43 62.3%	32 48.5%	59 86.8%	89 95.7%
Re-assessment of total CV risk after treatment	No	**237 29.8%**	21 4.4%	17 2.7%	15 27.8%	31 47.7%	11 17.5%	13 22.8%	32 47.1%	14 25.0%	28 40.6%	23 34.8%	24 35.3%	8 8.6%
	Yes	**558 70.2%**	40 5.6%	58 7.3%	39 2.2%	34 2.3%	52 2.5%	44 7.2%	36 2.9%	42 5.0%	41 9.4%	43 5.2%	44 4.7%	85 1.4%
Believe that global risk present limitations	No	**218 27.6%**	19 1.1%	29 8.7%	18 3.3%	13 0.3%	23 6.5%	9 15.8%	21 1.3%	13 3.6%	11 6.2%	44 6.7%	2 .9%	16 7.6%
	Yes	**571 72.4%**	42 8.9%	46 1.3%	36 6.7%	51 79.7%	40 3.5%	48 4.2%	46 8.7%	42 6.4%	57 3.8%	22 3.3%	66 7.1%	75 2.4%
Guidelines used for CVRF management	No	**97 12.4%**	9 15.0%	9 11.8%	13 25.5%	7 10.8%	8 12.7%	8 14.5%	7 10.3%	6 11.1%	5 7.5%	22 33.8%	2 3.0%	1 1.1%
	Yes	**687 87.6%**	51 85.0%	67 88.2%	38 74.5%	58 89.2%	55 87.3%	47 85.5%	61 89.7%	48 88.9%	62 92.5%	43 66.2%	65 97.0%	92 98.9%

Most of physicians reported they normally perform more than 2 determinations for measurement of blood pressure and lipid levels. 69.3% of them claimed they calculate the global CV risk in their patients. A high percentage of physicians (70.2%) reported they normally re-evaluate the risk of patients after treatment. However 72.4% of physicians claimed they believe that global risk calculation presents limitations. Finally 87.6% of physicians claimed they use clinical guidelines for the CV risk factors management. However 12.4% of them admitted not using any guideline for the management of CV risk factors.

Table 5. Cardiovascular risk factors prevention and management in EURIKA patients (Patient's questionnaire).

	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Physicians classification of EURIKA patients as a high CV risk													
If yes,	4609 (60.4)	340 (54.6)	364 (57.4)	333 (56.3)	496 (73.5)	443 (71.5)	317 (52.1)	369 (61.2)	342 (53.3)	316 (50.3)	353 (53.0)	514 (77.5)	422 (62.9)
ESC 2007 guidelines used	3648 (81.5)	237 (74.5)	298 (83.2)	238 (75.1)	398 (84.7)	421 (95.0)	270 (87.4)	360 (99.2)	289 (84.5)	257 (83.2)	246 (74.8)	411 (80.0)	223 (55.1)
Local guidelines	1066 (24.1)	81 (27.1)	66 (18.8)	76 (24.5)	79 (16.5)	48 (10.8)	85 (28.6)	82 (23.6)	47 (13.8)	99 (32.4)	115 (36.3)	39 (7.6)	249 (59.4)
Physician consider that patient including in the study has the following CV risk factors controlled													
Blood pressure	4208 (77.2)	335 (77.2)	351 (79.6)	357 (84.6)	458 (84.3)	352 (86.3)	305 (74.4)	303 (62.7)	294 (69.0)	388 (76.7)	357 (77.4)	322 (73.5)	386 (80.6)
Cholesterol	2759 (65.2)	244 (67.2)	256 (61.0)	252 (79.7)	264 (67.5)	321 (71.7)	221 (72.0)	100 (31.3)	239 (57.0)	231 (77.8)	259 (67.8)	114 (52.3)	258 (73.1)
Glucose	1387 (68.6)	101 (73.2)	107 (62.6)	98 (68.1)	201 (78.8)	121 (68.8)	106 (75.2)	40 (41.7)	108 (60.7)	115 (70.1)	127 (64.1)	145 (69.7)	118 (77.6)
Global CV risk controlled	5322 (70.3)	496 (80.0)	444 (70.7)	399 (68.7)	575 (85.8)	454 (73.2)	385 (63.8)	320 (53.2)	435 (68.7)	384 (61.5)	460 (70.0)	499 (75.5)	471 (70.6)
Physician is satisfied with the control of CV RF	4354 (57.2)	412 (66.2)	358 (56.5)	386 (65.3)	409 (61.0)	396 (63.9)	348 (57.0)	179 (29.8(	326 (50.9)	381 (60.7)	401 (60.4)	376 (56.7)	382 (56.9)
Patient aware of his/her risk (physician opinion)	5640 (74.1)	458 (74.1)	453 (71.5)	420 (71.3)	492 (73.2)	456 (73.5)	525 (85.9)	351 (58.2)	439 (68.5)	505 (80.4)	489 (73.6)	461 (69.5)	591 (87.9)

Physicians classified 60.4% of EURIKA patients as a high risk. Most of the patients were classified using the ESC 2007 guidelines (81.5%). Moreover, physicians declared that 77.2% of study patients have the blood pressure controlled, 65.2% have the cholesterol levels controlled and 68.6% the glucose levels controlled. In addition, physicians declared that 70.3% of EURIKA patients have global cardiovascular risk controlled. However, physicians were not satisfied with the control of the CV risk factors in 57.2% of the study patients. Finally, in opinion of the participating physicians 74.1% of the study patients are aware of his/her cardiovascular risk.

Table 6. Current medication for hypertension among patients with hypertension diagnosis.

Antihypertensive Medication	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Angiotensin II antagonists	2121 (38.2)	125 (28.0)	132 (29.5)	236 (54.4)	177 (32.2)	244 (59.1)	225 (52.8)	75 (15.4)	213 (49.0)	184 (35.7)	229 (48.2)	164 (37.2)	117 (23.9)
Antiadrenergic agents	27 (0.5)	7 (1.6)	1 (0.2)	3 (0.7)	2 (0.4)	1 (0.2)	2 (0.5)	1 (0.2)	1 (0.2)	1 (0.2)	5 (1.1)	1 (0.2)	2 (0.4)
Beta-Blockers	1787 (32.1)	193 (43.2)	199 (44.4)	115 (26.5)	296 (53.9)	97 (23.5)	122 (28.6)	162 (33.3)	61 (14.0)	206 (39.9)	133 (28.0)	105 (23.8)	98 (20.0)
Calcium channel blockers	1560 (28.1)	84 (18.8)	129 (28.8)	121 (27.9)	178 (32.4)	136 (32.9)	108 (25.4)	116 (23.9)	83 (19.1)	196 (38.0)	111 (23.4)	112 (25.4)	185 (38.2)
Diuretics	2397 (43.1)	174 (38.9)	195 (43.5)	190 (43.8)	294 (53.6)	163 (39.5)	189 (44.4)	178 (36.6)	210 (48.3)	222 (43.0)	199 (41.9)	181 (41.0)	201 (41.5)
ACE inhibitors	1912 (34.4)	188 (42.1)	144 (32.1)	71 (16.4)	258 (47.0)	105 (25.4)	54 (12.7)	265 (54.5)	108 (24.8)	157 (30.4)	147 (30.9)	179 (40.6)	231 (47.7)
Alpha-adrenergic antagonists	166 (3.0)	25 (5.6)	8 (1.8)	5 (1.2)	29 (5.3)	7 (1.7)	9 (2.1)	4 (0.8)	16 (3.7)	11 (2.1)	2 (0.4)	5 (1.1)	45 (9.3)
Other	223 (4.0)	27 (6.0)	20 (4.5)	26 (6.0)	30 (5.5)	8 (1.9)	13 (3.1)	6 (1.2)	14 (3.2)	15 (2.9)	23 (4.8)	30 (6.8)	11 (2.3)

Among patients diagnosed for hypertension 43.1% were currently taking diuretics, ranged from 36.6% in Russia to 53.6% in Germany. A large percentage of patients were under angiotensin II antagonist (38.2%), and 34.4% on ACE inhibitors.

Table 7. Current use of lipid lowering drugs among patients diagnosed for dyslipidemia.

Among patients diagnosed for dyslipidemia 35.9% were currently taking simvastatin, ranged from 69.3% in Sweden to 1.3% in Turkey. A large percentage of patients were under atorvastatin (19.1%), and on rosuvastatin(7.3%).

Lipid lowering drugs	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Atorvastatin	840 (19.1)	14 (3.8)	66 (15.2)	63 (18.8)	9 (2.2)	144 (32.0)	47 (14.0)	65 (20.2)	124 (28.7)	30 (9.6)	87 (22.1)	125 (54.6)	66 (16.2)
Lovastatin	22 (0.5)	1 (0.3)	0	3 (0.9)	4 (1.0)	2 (0.4)	0	2 (0.6)	8 (1.9)	1 (0.3)	1 (0.3)	0	0
Pravastatin	214 (4.9)	14 (3.8)	24 (5.5)	40 (11.9)	12 (3.0)	26 (5.8)	8 (2.4)	1 (0.3)	24 (5.6)	8 (2.6)	50 (12.7)	0	7 (1.7)
Rosuvastatin	320 (7.3)	6 (1.6)	53 (12.2)	54 (16.1)	3 (0.8)	66 (14.7)	0	35 (10.9)	2 (0.5)	12 (3.8)	42 (10.7)	32 (14.0)	15 (3.7)
Simvastatin	1582 (35.9)	156 (42.4)	157 (36.2)	50 (14.9)	193 (48.5)	107 (23.8)	196 (58.5)	38 (11.8)	135 (31.3)	217 (69.3)	81 (20.6)	3 (1.3)	238 (58.5)
Fluvastatin	100 (2.3)	13 (3.5)	6 (1.4)	6 (1.8)	12 (3.0)	3 (0.7)	0	2 (0.6)	28 (6.5)	0	12 (3.0)	11 (4.8)	2 (0.5)
Ezetimibe	151 (3.4)	7 (1.9)	14 (3.2)	15 (4.5)	15 (4.6)	33 (7.3)	6 (1.8)	4 (1.2)	14 (3.2)	7 (2.2)	20 (5.1)	6 (2.6)	10 (2.5)
Fibrates	220 (5.0)	17 (4.6)	23 (5.3)	57 (17.0)	56 (17.1)	14 (3.1)	0	4 (1.2)	33 (7.6)	2 (0.6)	16 (4.1)	34 (14.8)	6 (1.5)
Nicotin acids	6 (0.1)	0	1 (0.2)	1 (0.3)	1 (0.3)	2 (0.4)	0	0	0	0	0	0	0
Anion exchange resins	3 (0.1)	0	0	1 (0.3)	0	0	0	0	2 (0.5)	0	0	0	0
Combination therapy	68 (1.5)	2 (0.5)	6 (1.4)	7 (2.1)	6 (1.5)	9 (2.0)	3 (0.9)	9 (2.8)	1 (0.2)	0	21 (5.3)	0	2 (0.5)

Table 8. Current medication for diabetes among diabetic patients.

Diabetes medication	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Insulins	369 (18.0)	16 (11.0)	32 (18.5)	25 (17.4)	49 (19.1)	22 (12.5)	20 (14.1)	15 (15.6)	43 (23.6)	52 (31.7)	39 (19.0)	41 (19.5)	15 (9.8)
DDP-4 Inhibitors													
Sitagliptin	61 (3.0)	3 (2.1)	5 (2.9)	8 (5.6)	6 (2.3)	10 (5.7)	3 (2.1)	0	3 (1.6)	3 (1.8)	8 (3.9)	8 (3.8)	4 (2.6)
Vildagliptin/metformin	53 (2.6)	4 (2.7)	2 (1.2)	6 (4.2)	6 (2.3)	6 (3.4)	5 (3.5)	3 (3.1)	6 (3.3)	2 (1.2)	3 (1.5)	10 (4.8)	0
Sitagliptin/Metformin	47 (2.3)	4 (2.7)	2 (1.2)	3 (2.1)	8 (3.1)	5 (2.8)	1 (0.7)	1 (1.0)	7 (3.8)	1 (0.6)	11 (5.4)	2 (1.0)	2 (1.3)
Vidagliptin	8 (0.4)	2 (1.4)	0	0	0	1 (0.6)	0	1 (1.0)	0	0	4 (2.0)	0	0
Sulphonylureas													
Chlorpropamide	7 (0.3)	0	0	1 (0.7)	0	0	0	1 (1.0)	0	0	0	5 (2.4)	0
Glibenclamide	104 (5.1)	3 (2.1)	3 (1.7)	14 (9.7)	14 (5.5)	5 (2.8)	5 (3.5)	20 (20.8)	11 (6.0)	12 (7.3)	12 (5.9)	2 (1.0)	3 (2.0)
Gliclazide	246 (12.0)	17 (11.6)	28 (16.2)	25 (17.4)	0	16 (9.1)	0	13 (13.5)	18 (9.9)	1 (0.6)	30 (14.6)	67 (31.9)	30 (19.6)
Glimepiride	226 (11.0)	11 (7.5)	8 (4.6)	12 (8.3)	38 (14.8)	41 (23.3)	32 (22.5)	5 (5.2)	13 (7.1)	7 (4.3)	17 (8.3)	38 (18.1)	4 (2.6)
Glipizide	23 (1.1)	0	2 (1.2)	4 (2.8)	0	1 (0.6)	2 (1.4)	0	1 (0.5)	5 (3.0)	1 (0.5)	5 (2.4)	2 (1.3)
Gliquidone	9 (0.4)	1 (0.7)	6 (3.5)	0	0	0	0	0	0	0	0	0	1 (0.7)
Glipentide	1 (0.0)	0	0	0	0	0	0	0	0	0	0	1 (0.5)	0
Metiglinides													
Nateglinide	20 (1.0)	0	0	0	2 (0.8)	2 (1.1)	0	1 (1.0)	0	1 (0.6)	2 (1.0)	12 (5.7)	0
Repaglinide	53 (2.6)	2 (1.4)	12 (6.9)	7 (4.9)	1 (0.4)	1 (0.6)	0	1 (1.0)	7 (3.8)	7 (4.3)	7 (3.4(	6 (2.9)	2 (1.3)
Biguanides													
Metformin	1293 (63.2)	95 (65.1)	120 (69.4)	92 (63.9)	143 (55.9)	123 (69.9)	92 (64.8)	47 (49.0)	109 (59.9)	97 (59.1)	127 (62.0)	149 (71.0)	99 (64.7)
Thiazolidinediones													
Pioglitazone	117 (5.7)	9 (6.2)	1 (0.6)	8 (5.6)	6 (2.3)	24 (13.6)	0	0	2 (1.1)	3 (1.8)	15 (7.3)	37 (17.6)	12 (7.8)
Rosiglitazone	73 (3.6)	4 (2.7)	6 (3.5)	11 (7.6)	7 (2.7)	4 (2.3)	7 (4.9)	0	3 (1.6)	5 (3.0)	7 (3.4)	14 (6.7)	5 (3.3)
Asociations													
Pioglitazone/Metformin	37 (1.8)	7 (4.8)	2 (1.2)	6 (4.2)	3 (1.2)	2 (1.1)	1 (0.7)	0	0	1 (0.6)	7 (3.4)	3 (1.4)	5 (3.3)
Rosiglitazone/Glimepiride	15 (0.7)	1 (0.7)	0	2 (1.4)	3 (1.2)	1 (0.6)	4 (2.8)	0	1 (0.5)	2 (1.2)	0	1 (0.5)	0
Acarbose	36 (1.8)	0	2 (1.2)	9 (6.3)	4 (1.6)	2 (1.1)	0	0	2 (1.1)	3 (1.8)	2 (1.0)	12 (5.7)	0

DDP-4 (dipetidyl peptidase inhibitors)

Among patients diagnosed for diabetes 18% were currently under insulin therapy. On the other hand, 63.2% were receiving metformin.

Table 9 Achievement of goals among patients treated for the main cardiovascular risk factors, by country.

	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK	TOTAL, n (%)
Hypertension, n	447	448	434	549	413	426	486	435	516	475	441	489	**5559**
Drug-treated, %	92.8	96.4	97.2	97.3	97.3	90.1	85.4	92.4	96.3	95.2	94.6	95.5	**94.2**
Controlled (SBP <140 mmHg and DBP <90 mmHg), %*	35.9	43.7	45.5	36.3	47.5	34.6	35.9	41.0	33.6	37.4	32.1	42.8	**38.8**
Dyslipidemia, n	368	434	336	404	450	335	305	432	313	394	229	407	**4407**
Drug-treated, %	58.7	75.1	81.2	65.1	80.2	75.5	49.8	81.2	85.9	74.6	80.3	82.6	**74.4**
Controlled (TC <5 mmol/l), %*	32.9	54.6	39.9	33.5	39.1	45.8	27.6	32.8	48.0	45.9	30.4	70.8	**43.7**
Controlled (TC <5 mmol/l and LDL-c <3 mmol/l), %*	31.9	52.8	37.7	30.4	37.4	41.9	24.3	31.0	45.3	44.6	30.4	68.4	**41.2**
Type 2 Diabetes, n	146	173	144	256	176	142	95	182	164	205	210	153	**2046**
Drug-treated, %	86.3	90.7	93.7	80.9	92.0	82.4	84.2	87.9	83.5	89.8	95.2	77.8	**87.2**
Controlled (HbA1c <6.5%), %	39.7	48.4	41.5	40.6	43.8	41.9	26.2	33.7	23.4	41.8	26.0	27.7	**36.7**
Controlled (FPG <6.1 mmol/l), %	16.7	19.7	27.4	27.0	15.4	35.9	7.5	13.1	43.1	16.3	6.0	13.4	**20.0**
Controlled (HbA1c <6.5% and FPG <6.1 mmol/l), %	7.9	6.4	6.7	11.1	8.0	15.4	3.7	3.1	10.9	8.1	2.5	1.7	**7.2**
Obesity, n	315	315	217	332	311	224	342	256	235	298	240	239	**3324**
Treatment with lifestyle advice, %	91.7	91.7	98.2	94.6	94.5	86.2	97.7	97.6	72.3	88.6	96.2	94.1	**92.2**
Controlled (BMI <30 kg/m^2), %	28.0	29.2	19.6	28.8	37.1	26.7	23.3	21.1	23.3	23.8	16.1	12.7	**24.7**
Controlled (WC <102/88 cm), %	6.2	12.0	2.9	9.0	7.6	4.9	5.9	11.2	3.6	7.0	2.2	5.2	**6.8**
Controlled (BMI <30 kg/m^2 and WC <102/88 cm), %	3.2	6.0	2.4	5.3	4.1	2.7	0.9	4.1	2.4	3.8	0.4	1.4	**3.2**

AUS: Austria. BEL: Belgium. FRA: France. GER: Germany. GRE: Greece. NOR: Norway. RUS: Russia. SPA: Spain. SWE: Sweden. SWI: Switzerland. TUR: Turkey. UK: United Kingdom. SBP: systolic blood pressure. DBP: diastolic blood pressure. TC: total cholesterol. LDL-c: low density lipoprotein cholesterol. HbA1c: glycated haemoglobin. FPG: fasting plasma glucose. BMI: body mass index. WC: waist circumference. ***If diabetes**: Blood pressure <130/80 mmHg, Total cholesterol <4.5 mmol/l, and LDL cholesterol <2.5 mmol/l. **Cardiovascular risk factor definition: diagnosed (data extracted from medical records) and/or current receiving treatment**

Among 5559 patients with hypertension, 94.2% were on antihypertensive drugs. Target blood pressure was reached by 38.8% of treated patients (BCR: 32.1-47.5%). Of 4407 patients with dyslipidaemia, 74.4% were treated with lipid-lowering drugs. Target total cholesterol and LDL cholesterol levels were reached by 41.2% of treated patients (BCR: 24.3-68.4%). The proportion of patients attaining the total cholesterol target alone was 43.7% (BCR 27.6-70.8%). Among 2046 patients with type-2 diabetes, 87.2% were treated with antidiabetic

Secondary Objectives:
To identify barriers for estimating and using global CV risk scores in clinical practice: physician perception, guidelines implementation in daily clinical practice, patient education, and cost-containment measures implemented.

Table 10. Physician's barriers in the management of CV risk factors: evaluation of global CV risk, barriers (knowledge, perception...)

N (%)*	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Calculate total CV risk	552 (69.3)	42 (67.7)	60 (78.9)	26 (49.1)	36 (54.5)	50 (79.4)	34 (60.7)	89 (95.7)	46 (67.6)	35 (62.5)	43 (62.3)	32 (48.5)	59 (86.8)
If No, reasons													
Time Constraint	146 (60.8)	12(63.2)	9 (64.3)	11 (40.7)	19 (65.5)	9 (69.2)	12 (54.5)	2 (50.0)	14 (63.6)	16 (76.2)	10 (38.5)	25 (73.5)	7 (77.8)
Little usefulness	53 (22.1)	5 (26.3)	1 (7.1)	5 (18.5)	9 (31.0)	3 (23.1)	5 (22.7)	1 (25.0)	2 (9.1)	5 (23.8)	12 (46.2)	4 (11.8)	1 (11.1)
Don't know how to calculate it	48 (20)	3 (15.8)	3 (21.4)	9 (33.3)	2 (6.9)	6 (46.2)	10 (45.5)	1 (25.0)	4 (18.2)	2 (9.5)	1 (3.8)	7 (20.6)	0
Don't know how to proceed (risk obtained)	10 (4.2)	1 (5.3)	0	0	0	1 (7.7)	1 (4.5)	0	1 (4.5)	0	3 (11.5)	3 (8.8)	0
Other	31 (12.9)	4 (21.1)	3 (21.4)	3 (11.1)	6 (20.7)	0	0	0	3 (13.6)	1 (4.8)	6 (23.1)	2 (5.9)	3 (33.3)
If yes, how													
-Chart	383 (69.9)	33 (78.6)	42 (70.0)	17(65.4)	23 (65.7)	34 (68.0)	21 (61.8)	88 (98.9)	31 (68.9)	27 (81.8)	32 (74.4)	23 (71.9)	12 (20.3)
- Software	181 (32.8)	0	22 (36.7)	6 (23.1)	13 (37.1)	12 (24.0)	13 (38.2)	13 (14.6)	19 (42.2)	4 (12.1)	13 (30.2)	6 (18.8)	51 (86.4)
-Other	36 (6.6)	0	2 (3.3)	6 (23.1)	5 (14.3)	10 (20.0)	2 (5.9)	0	0	3 (9.1)	1 (2.3))	5 (15.6)	1 (1.7)
If Yes,													
-Comments resutls with patients	531 (96.9)	41 (97.6)	59 (98.3)	25 (96.2)	35 (97.2)	49 (98.0)	34 (100)	87 (98.9)	42 (93.3)	31 (93.9)	42 (97.7)	31 (96.9)	55 (93.2)
-Reassessment after treatment	558 (70.2)	40 (65.6)	58 (77.3)	39 (72.2)	34 (52.3)	52 (82.5)	44 (77.2)	85 (91.4)	36 (52.9)	42 (75.0)	41 (59.4)	43 (65.2)	44 (64.7)
If yes, for what?													
- Decision on antihypertensive treatment	390 (71.0)		36 (60.0)	18 (69.2)	24 (66.7)	42 (84.0)	28 (82.4)	75 (84.3)	37 (82.2)	25 (75.8)	28 (65.1)	25 (78.1)	20 (33.9)
- Decision on lipid lowering drugs	489 (89.1)		56 (93.3)	22 (84.6)	24 (66.7)	47 (94.0)	29 (85.3)	88 (98.9)	40 (88.9)	30 (90.9)	39 (90.7)	24 (75.0)	55 (93.2)
-Decision on antiplatelet aggregation therapy	226 (41.2)		14 (23.3)	11 (42.3)	20 (55.6)	31 (62.0)	12 (35.3)	31 (34.8)	25 (55.6)	17 (51.5)	20 (46.5)	12 (37.5)	14 (23.7)
-Advice on healthy lifestyle	393 (71.6)		38 (63.3)	20 (76.9)	25 (69.4)	35 (70.0)	28 (82.4)	69 (77.5)	34 (75.6)	25 (75.8)	32 (74.4)	27 (84.4)	24 (40.7)
-Other	20 (3.6)		2 (3.3)	3 (11.5)	4 (11.1)	2 (4.0)	0	0	2 (4.4)	2 (6.1)	2 (4.7)	0	0
If yes, Instrument													
-SCORE (ESC)	285 (52.4)	18 (43.9)	51 (85.0)	9 (37.5)	21 (58.3)	18 (36.0)	9 (26.5)	78 (87.6)	29 (64.4)	23 (69.7)	24 (57.1)	4 (12.5)	1 (1.7)

-Framingham	92 (16.9)	2 (4.9)	4 (6.7)	5 (20.8)	2 (5.6)	18 (36.0)	8 (23.5)	3 (3.4)	8 (17.8)	0	4 (9.5)	11 (34.4)	27 (46.6)
-Framingham local calibrated	96 (17.6)	6 (14.6)	6 (10.0)	5 (20.8)	7 (19.4)	7 (14.0)	4 (11.8)	11 (12.4)	13 (28.9)	3 (9.1)	4 (9.5)	7 (21.9)	23 (39.7)
-European Society of Hypertension & ESC2007	170 (31.3)	9 (22.0)	4 (6.7)	7 (29.2)	13 (36.1)	21 (42.0)	16 (47.1)	55 (61.8)	7 (15.6)	11 (33.3)	12 (28.6)	12 (37.5)	3 (5.2)
-Other	67 (12.3)	12 (29.3)	3 (5.0)	3 (12.5)	9 (25.0)	2 (4.0)	4 (11.8)	4 (4.5)	4 (8.9)	4 (12.1)	8 (19.0)	2 (6.3)	12 (20.7)
If SCORE (ESC) use, level of patient risk to start therapy for blood pressure													
- <5%	52 (18.4)	4 (22.2)	11 (22.0)	1 (12.5)	1 (4.8)	1 (5.6)	0	28 (36.4)	0	5 (21.7)	1 (4.2)	0	0
-5-10%	149 (52.8)	3 (33.3)	18 (36.0)	5 (62.5)	11 (52.4)	13 (72.2)	7 (77.8)	40 (51.9)	20 (69.0)	12 (52.2)	12 (50.0)	4 (100)	1 (100)
-10% or more	29 (10.3)	6 (33.3)	5 (10.0)	0	5 (23.8)	2 (11.1)	2 (22.2)	1 (1.3)	4 (13.8)	0	4 (16.7)	0	0
Not used	52 (18.4)	2 (11.1)	16 (32.0)	2 (25.0)	4 (19.0)	2 (11.1)	0	8 (10.4)	5 (17.2)	6 (26.1)	7 (29.2)	0	0
If SCORE (ESC) use, level of patient risk to start therapy for lipid lowering drug													
- <5%	36 (12.8)	2 (22.2)	6 (12.0)	0	9 (42.9)	2 (11.1)	0	17 (22.1)	1 (3.4)	4 (17.4)	0	2 (50.0)	0
-5-10%	180 (64.1)	5 (27.8)	35 (70.0)	6 (75.0)	10 (47.6)	12 (66.7)	6 (66.7)	55 (71.4)	22 (75.9)	14 (60.9)	14 (58.3)	2 (50.0)	0
-10% or more	48 (17.0)	6 (33.3)	9 (18.0)	0	0	3 (16.7)	3 (33.3)	2 (2.6)	5 (17.2)	2 (8.7)	8 (33.3)	0	0
Not used	17 (6.0)	3 (16.7)	0	2 (25.0)	2 (9.5)	1 (5.6)	0	3 (3.9)	1 (3.4)	3 (13.0)	2 (8.3)	0	0
If Framingham use, level of patient risk to start therapy fofr blood pressure													
- <10%	7 (7.4)	1 (16.7)	0	1 (25.0)	1 (14.3)	1 (14.3)	1 (25.0)	0	1 (7.7)	0	1 (25.0)	1 (14.3)	0
-10-20%	54 (56.8)	4 (66.7)	5 (83.3)	1 (25.0)	4 (57.1)	5 (71.4)	1 (25.0)	7 (63.6)	9 (69.2)	3(100)	3 (75.0)	5 (71.4)	6 (26.1)
-20% or more	13 (13.7)	1 (16.7)	0	0	1 (14.3)	0	1 (25.0)	2 (18.2)	1 (7.7)	0	0	1 (14.3)	6 (26.1)
Not used	21 (22.1)	0	1 (16.7)	2 (50.0)	1 (14.3)	1 (14.3)	1 (25.0)	2 (18.2)	2 (15.4)	0	0	0	11 (47.8)
If Framingham use, level of patient risk to start therapy for lipid lowering drug													
- <10%	6 (6.3)	1 (16.7)	0	0	0	2 (28.6)	1 (25.0)	0	0	0	0	1 (14.3)	0
-10-20%	55 (57.9)	5 (83.3)	6 (100.0)	2 (50.0)	4 (57.1)	4 (57.1)	0	6 (54.5)	10 (76.9)	3(100)	4 (100)	5 (71.4)	7 (30.4)
-20% or more	26 (27.4)	0	0	0	2 (28.6)	0	2 (50.0)	3 (27.3)	2 (15.4)	0	0	1 (14.3)	16 (69.6)
Not used	8 (8.4)	0	0	2 (50.0)	1 (14.3)	1 (14.3)	1 (25.0)	2 (18.2)	1 (7.7)	0	0	0	0

Missing values has not been included in the % calculation

69.3% of physicians claim to evaluate global CV risk in their patients. For those physicians who do not calculate global CV risk in their patients, the main reason provided was lack of time (60.8%) but a significant percentage of them admitted not knowing how to calculate it or claimed that they do not find it useful. Most physicians use a chart for global CV risk evaluation. Almost all the consulted physicians declare they comment on the global risk results with patients, and 70% of them reassess the global risk after treatment.

Physicians calculate the global risk in order to make decisions related to lipid lowering drugs, anti-hypertensive or for giving advice regarding life style to patients. The most used guideline for global CV risk calculation is SCORE from the ESC. Most of the physicians decided to start lipid lowering drug therapy when a patients SCORE ranged between 5% and 10%, or Framingham scale results ranged from 10-20%. However an large percentage of physicians decided to start lipid lowering drug only when patients global risk results are over 10% (SCORE scale) or over 30% (Framingham scale).

Table 11. Physicians opinion about prevention: barriers in the management of CV risk factors, global CV risk limitations.

N (%)*	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Belief global CV risk calculation has limitations, If yes,	**571 (72.4)**	**42 (68.9)**	**46 (61.3)**	**36 (66.7)**	**51 (79.7)**	**40 (63.5)**	**48 (84.2)**	**75 (82.4)**	**46 (68.7)**	**42 (76.4)**	**57 (83.8)**	**22 (33.3)**	**66 (97.1)**
-overestimation of risk	197 (36.4)	13 (33.3)	5 (11.6)	9 (29.0)	21 (45.7)	17 (42.5)	20 (44.4)	22 (29.7)	24 (53.3)	12 (29.3)	13 (25.5)	17 (77.3)	24 (37.5)
-don't take other important risk factors into account	513 (92.1)	39 (97.5)	44 (95.7)	35 (100)	39 (83.0)	34 (85.0)	42 (93.3)	73 (97.3)	42 (93.3)	40 (100)	51 (89.5)	13 (59.1)	61 (93.8)
-don't allow risk calculation in the elderly	380 (69.3)	23 (56.1)	30 (68.2)	23 (69.7)	36 (80.0)	19 (47.5)	28 (62.2)	52 (70.3)	33 (73.3)	34 (87.2)	35 (63.6)	12 (54.5)	55 (84.6)
-asses risk over a long period (10y)	267 (49.5)	15 (37.5)	12 (27.9)	17 (54.8)	23 (52.3)	16 (40.0)	18 (40.0)	56 (74.7)	26 (57.8)	18 (46.2)	26 (51.0)	18 (81.8)	22 (34.4)
Level of blood pressure to start blood pressure lowering drugs													
≥140/90 mmHg for all patients	147 (26.8)	21 (50)	11 (25.6)	9 (25.7)	18 (35.3)	9 (21.4)	10 (23.8)	12 (16.7)	9 (20.9)	10 (25.0)	15 (28.3)	12 (54.5)	11 (17.5)
≥140/90 mmHg except for diabetes	401 (73.2)	21 (50)	32 (74.4)	26 (74.3)	33 (64.7)	33 (78.6)	32 (76.2)	60 (83.3)	34 (79.1)	30 (75.0)	38 (71.7)	10 (45.5)	52 (82.5)
Level of LDL-Ch to start lipid lowering drugs													
≥160 mg/dL for all patients	80 (14.6)	4 (9.5)	9 (20.9)	4 (11.1)	8 (15.4)	6 (14.3)	1 (2.4)	20 (28.2)	6 (14.0)	2 (5.1)	5 (9.6)	9 (40.9)	6 (9.4)
Depending on the patients risk	467 (85.4)	38 (90.5)	34 (79.1)	32 (88.9)	44 (84.6)	36 (85.7)	40 (97.6)	51 (71.8)	37 (86.0)	37 (94.9)	47 (90.4)	13 (59.1)	58 (90.6)

Missing values has not been included in the % calculation

72.4% of consulted physicians believe that global CV risk evaluation has limitations. The main limitations they found in this evaluation of risk are the following: the evaluation does not take other important risk factors into account or does not allow the evaluation of risk in the elderly. More than 70% of physicians decide to start antihypertensive therapy when patients show ≥140/90 mmHg except for diabetes.

Table 12. Clinical guideline followed by physicians (Physician's questionnaire).

N (%)	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
ESC 2007	444 (56.3)	35 (56.5)	56 (73.7)	21 (41.2)	40 (60.6)	28 (44.4)	36 (64.3)	74 (79.6)	41 (60.3)	33 (61.1)	39 (58.2)	27 (40.9)	14 (20.9)
ATP III guidelines	70 (8.9)	1 (1.6)	2 (2.6)	2 (3.9)	6 (9.1)	16 (25.4)	0	17 (18.3)	11 (16.2)	1 (1.9)	4 (6.0)	9 (13.6)	1 (1.5)
ESC and ESH 2007	236 (29.9)	17 (27.4)	16 (21.1)	15 (29.4)	30 (45.5)	24 (38.1)	8 (14.3))	55 (59.1)	13 (19.1)	8 (14.8)	30 (44.8)	11 (16.7)	9 (13.4)
JNC-7 guidelines (on hypertension)	68 (8.6)	2 (3.2)	2 (2.6)	3 (5.9)	3 (4.5)	16 (25.4)	0	6 (6.5)	11 (16.2)	0	1 (1.5)	19 (28.8)	5 (7.5)
Local guidelines	134 (17.0)	3 (4.8)	4 (5.3)	8 (15.7)	2 (3.0)	2 (3.2)	15 (26.8)	30 (32.3)	6 (8.8)	14 (25.9)	14 (20.9)	3 (4.5)	33 (49.3)
Other	59 (7.5)	8 (12.9)	4 (5.3)	3 (5.9)	4 (6.1)	2 (3.2)	0	5 (5.4)	4 (5.9)	4 (7.4)	9 (13.4)	0	16 (23.9)
None	102 (12.9)	11 (17.7)	9 (11.8)	13 (25.5)	8 (12.1)	8 (12.7)	9 (16.1)	1 (1.1)	7 (10.3)	6 (11.1)	5 (7.5)	23 (34.8)	2 (3.0)

The most popular clinical guideline used by participating physicians (56.3%) in the study was the European Society of Cardiology guidelines (2007), alone or in combination with the European society of Hypertension (29.9%). There were 17% of physicians who declared to using local guidelines. Finally 12.9% of physicians admitted not using any type of guideline for the management of CV risk factors.

Table 13. Clinical guideline followed by physicians II (Physician's questionnaire).

N (%)	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
If no guidelines used, why?													
- Do not know them	28 (27.7)	2 (18.2)	1 (12.5)	8 (61.5)	1 (12.5)	1 (12.5)	4 (44.4)	0	1 (14.3)	1 (16.7)	0	8 (34.8)	1 (50.0)
-Guidelines are not realistic or not adapted to everyday practice	24 (23.8)	6 (54.5)	3 (37.5)	1 (7.7)	6 (75.0)	0	2 (22.2)	0	1 (14.3)	3 (50.0)	1 (20.0)	0	1 (50.0)
-Guidelines are confused	11 (10.9)	1 (9.1)	0	1 (7.7)	2 (25.0)	0	0	0	0	1 (16.7)	1 (20.0)	4 (17.4)	1 (50.0)
-Too many guidelines, it is not easy to choose the appropriate	48 (47.5)	5 (45.5)	5 (62.5)	4 (30.8)	5 (62.5)	7 (87.5)	2 (22.2)	0	5 (71.4)	4 (66.7)	4 (80.0)	5 (21.7)	1 (50.0)
-Don't agree with recommendations	5 (5.0)	1 (9.1)	1 (12.5)	0	3 (37.5)	0	0	0	0	0	0	0	2 (100)
-Time constraint	34 (33.7)	6 (54.5)	1 (12.5)	1 (7.7)	3 (37.5)	3 (37.5)	5 (55.6)	0	2 (28.6)	3 (50.0)	1 (20.0)	7 (30.4)	1 (50.0)
-Bad acceptance by the patient	14 (13.9)	2 (18.2)	3 (37.5)	0	3 (37.5)	3 (37.5)	2 (22.2)	0	0	0	1 (20.0)	0	2 (100)
-Other reason	4 (4.0)	1 (9.1)	0	0	1 (12.5)	0	0	0	0	0	1 (20.0)	1 (4.3)	2 (100)

The main reasons why physicians do not use guidelines for the management of CV risk factors were the large number of guidelines; 47.5% of physicians believe that there are too many and it is not easy to choose one, and lack of time (33.7%). 27.7% declare that they do not know current guidelines and 23.4 of consulted physicians perceived that current guidelines are not realistic or not adapted to everyday practice.

To evaluate the correlation between traditional CV risk factors and emergent biomarkers Apo-A1, Apo-B, hs-CRP.

Table 14 Emergent biomarkers levels in EURIKA patients (Patient's CRF).

	TOTAL	AUS	BEL	FRA	GER	GRE	NOR	RUS	SPA	SWE	SWI	TUR	UK
Apo-A1 values g/L													
Mean (SD)	1.73	2.17	1.98	1.58	2.92	1.53	1.51	1.48	1.53	1.55	1.55	1.36	1.51
	(5.63)	(10.46)	(7.56)	(0.27)	(14.15)	(0.25)	(0.27)	(0.25)	(0.26)	(0.27)	(0.27)	(0.24)	(0.27)
Apo-B values g/L													
Mean (SD)	1.03	1.20	1.04	0.93	1.52	0.94	0.96	1.10	0.96	0.92	0.91	0.99	0.85
	(2.77)	(4.41)	(4.25)	(0.23)	(7.13)	(0.25)	(0.23)	(0.24)	(0.23)	(0.25)	(0.25)	(0.24)	(0.23)
Apo-B / Apo-A1 g/L													
Mean (SD)	0.7	0.88	0.58	0.61	1.13	0.64	0.66	0.77	0.65	0.61	0.61	0.76	0.58
	(2.14)	(3.86)	(0.20)	(0.19)	(6.01)	(0.21)	(0.21)	(0.22)	(0.19)	(0.20)	(0.22)	(0.34)	(0.18)
Hs-CRP values mg/L													
Mean (SD)	4.21	4.57	4.26	3.71	3.93	3.19	4.19	4.52	4.29	3.68	4.31	5.34	4.41
	(8.7)	(8.53)	(10.16)	(7.73)	(7.94)	(5.95)	(7.45)	(7.77)	(12.39)	(7.95)	(10.09)	(9.06)	(7.49)

The mean value of the inflammatory biomarker, the high sensitivity C Reactive protein was over 2 mg/L, 4.21 mg/L.

To apply EURIKA study data into the NHANES III 35 epidemiological model to estimate the attributable risk for coronary heart disease mortality among patients with CV risk factors.

Table 15. Population attributable risk 95% CI**

	Population attributable risk %	95% CI
Austria	2.4	2.1-2.7
Belgium	2.1	1.8-2.4
France	2.4	2.1-2.7
Germany	2.7	2.4-3.0
Greece	1.6	1.3-1.8
Norway	3.0	2.7-3.4
Spain	2.2	1.9-2.4
Sweden	3.0	2.6-3.3
Switzerland	2.5	2.2-2.8
Turkey	2.1	1.8-2.3
UK	3.3	2.9-3.6
Russia	1.4	1.1-1.6
Total	**2.4**	**2.3-2.5**

**Preliminary results

The adjusted attributable risks were 2.4% (country specific ranged from 1.4% in Russia to 3.3% in the UK) for former smoking.

Table 16 Population attributable risk 95% CI**

	Population attributable risk %	95% CI
Austria	27.0	25.7-28.3
Belgium	29.6	28.5-30.8
France	25.3	23.9-26.7
Germany	26.5	25.2-27.7
Greece	31.3	30.3-32.4
Norway	24.3	22.8-25.7
Spain	29.4	28.2-30.5
Sweden	22.8	21.3-24.3
Switzerland	26.5	25.2-27.7
Turkey	17.2	15.6-18.7
UK	25.1	23.8-26.4
Russia	23.7	22.2-25.1
Total	**25.9**	**25.5-26.3**

**Preliminary results
The adjusted attributable risks were 25.9% (country specific ranged from 15.4% in Russia to 37.4% in the UK) for former smoking.

Table 17. Prevalence of hypertension and population attributable risk 95% CI**

	Prevalence %	Population attributable risk %	95% CI
Austria	71.1	22.6	21.7-23.4
Belgium	69.5	22.2	21.3-23.1
France	72.8	23.0	22.1-23.9
Germany	78.8	24.4	23.7-25.1
Greece	66.1	21.3	20.4-22.3
Norway	68.3	21.9	20.9-22.8
Spain	67.7	21.7	20.8-22.6
Sweden	80.6	24.8	24.1-25.5
Switzerland	69.8	22.2	21.4-23.1
Turkey	66.7	21.5	20.6-22.4
UK	71.6	22.7	21.9-23.5
Russia	80.3	24.8	24.0-25.5
Total	**71.9**	**22.8**	**22.5-23.0**

**Preliminary results

The adjusted attributable risks were 22.8% (country specific ranged from 21.3% in Greece to 24.8% in Russia and Sweden).

Table 18. Prevalence of diabetes and population attributable risk 95% CI**

	Population attributable risk %	95% CI
Austria	27.0	24.1-29.8
Belgium	29.9	27.1-32.5
France	27.9	24.9-30.6
Germany	37.4	35.0-39.6
Greece	31.1	28.3-33.7
Norway	26.9	24.0-29.7
Spain	30.8	28.0-33.3
Sweden	29.5	26.7-32.1
Switzerland	32.7	30.1-35.1
Turkey	33.0	30.4-35.5
UK	26.3	23.5-28.9
Russia	19.8	16.8-22.7
Total	**29.7**	**28.9-30.5**

**Preliminary results

The prevalence of diabetes was 26.6%. The adjusted attributable risks were 29.7% (country specific ranged from 19.8% in Russia to 37.4% in Germany).