



EUROPEAN
SOCIETY OF
CARDIOLOGY®

**Euro Heart Survey
HF II on Acute Heart Failure
Presentation of acute heart
failure in clinical practice 2005**

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"EHS - HF II" *Objectives*

- **Specific issues addressed in the second Euro Heart Survey on Heart Failure are:**
- **Etiology of acute heart failure in Europe.**
- **Patient characteristics: The severity of the clinical condition will be classified according to the new guidelines:**
 - **Decompensated heart failure,**
 - **pulmonary odema,**
 - **cardiogenic shock,**
 - **heart failure related to hypertension,**
 - **right ventricular heart failure, or**
 - **high output heart failure.**

"EHS - HF II on AHF" Objectives

- Diagnostic processes will be assessed.
 - The use of catheter related diagnostics and therapeutic procedures, (pulmonary artery catheter, coronary angiography etc). The practise of clinical evaluation and diagnostic procedures (X-ray, echocardiography , MRI, fast CT, radionuclide imaging) will be evaluated.
- Therapy:
 - Oxygenation and respiratory care and medications will be registered,
 - **at hospitalisation, at discharge**
 - **the prognosis by therapy, (ie. beta blocking agents, ACE-inhibitors, Angiotensin II-blocking agents and diuretics, inotropes or new agents.)**
 - Treatment of concomitant disease

"- HF II" Objectives

- **The need and utilization of devices :**
 - **pacemakers, implantable cardiac defibrillators (ICDs), intra-aortic balloon pumping, left ventricular assist devices.**
- **The incidence of different arrhythmias as a cause or as a concomitant problem is analysed.**
- **Length of hospitalization.**
 - **in intensive care and 0**
 - **n ward,**
 - **The length of stay in different units.**
 - **The use of biomarkers**
 - **Specific interest is on anemia, diabetes and renal dysfunction, Rehospitalizations and mortality.at 3 months and at 1 year.**
- **The alterations of medication will be recorded.**

“- HF II” Inclusion criteria

All patients admitted to hospital (emergency area, on internal medicine or cardiology wards, CCU or intensive care) with **dyspnoea and verification of heart failure** (acute de novo or acute decompensated chronic heart failure) **based on following criteria:**

- **1.** Symptoms (dyspnoea) and signs (i.e. rales, hypotension, hypoperfusion) of heart failure.
- **2.** Lung congestion on chest X-ray. or
- **3.** RV HF (severe pulmonary embolism, congenital, right ventricular AMI).

HF II – Patient Enrollment

Patients enrolled: by 150805 **3210**

Complete CRFs received: **2927**

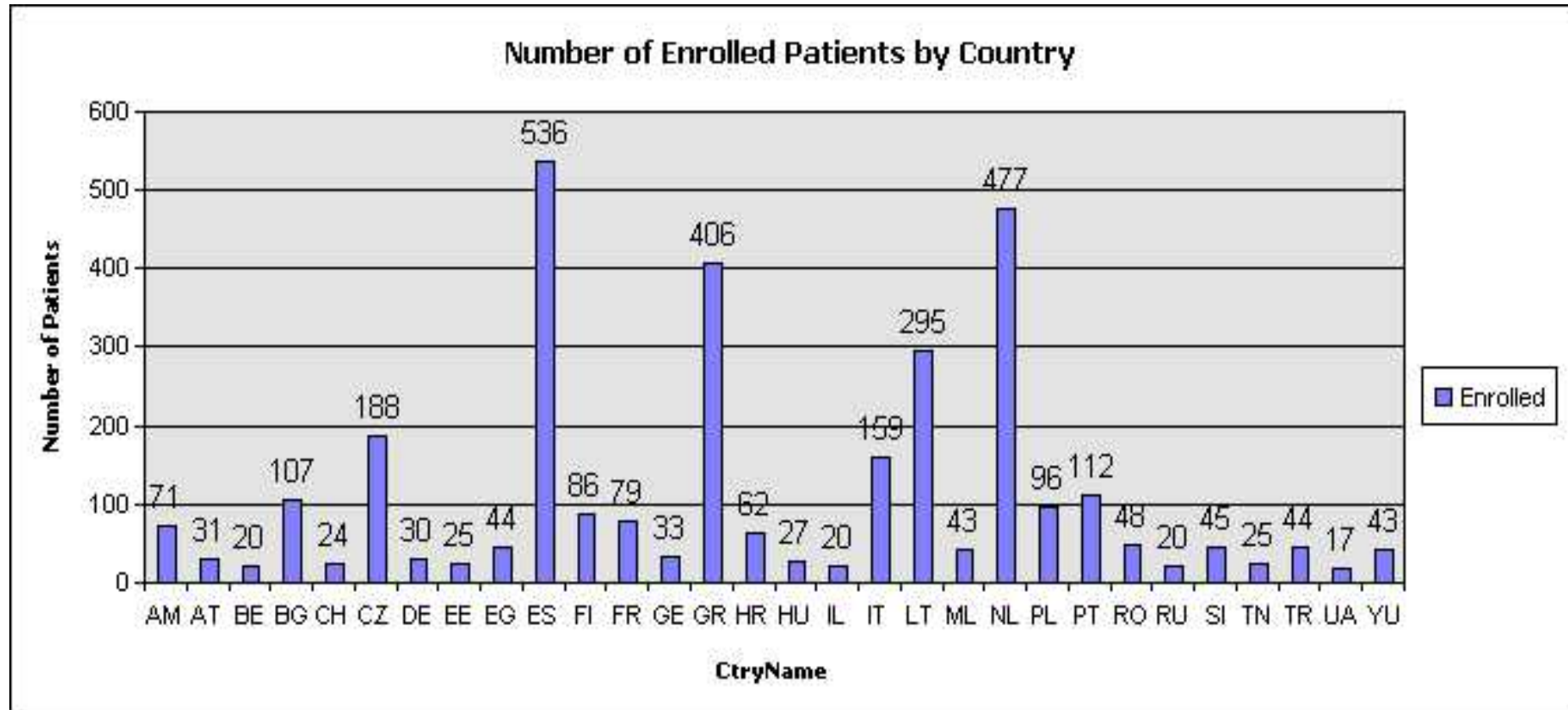
3 month follow-up CRFs complete: **2322**

Active centres: **129**

Active countries: **30**

Deadline to enrol patients = 31st August 2005

HF II - Enrollment by country



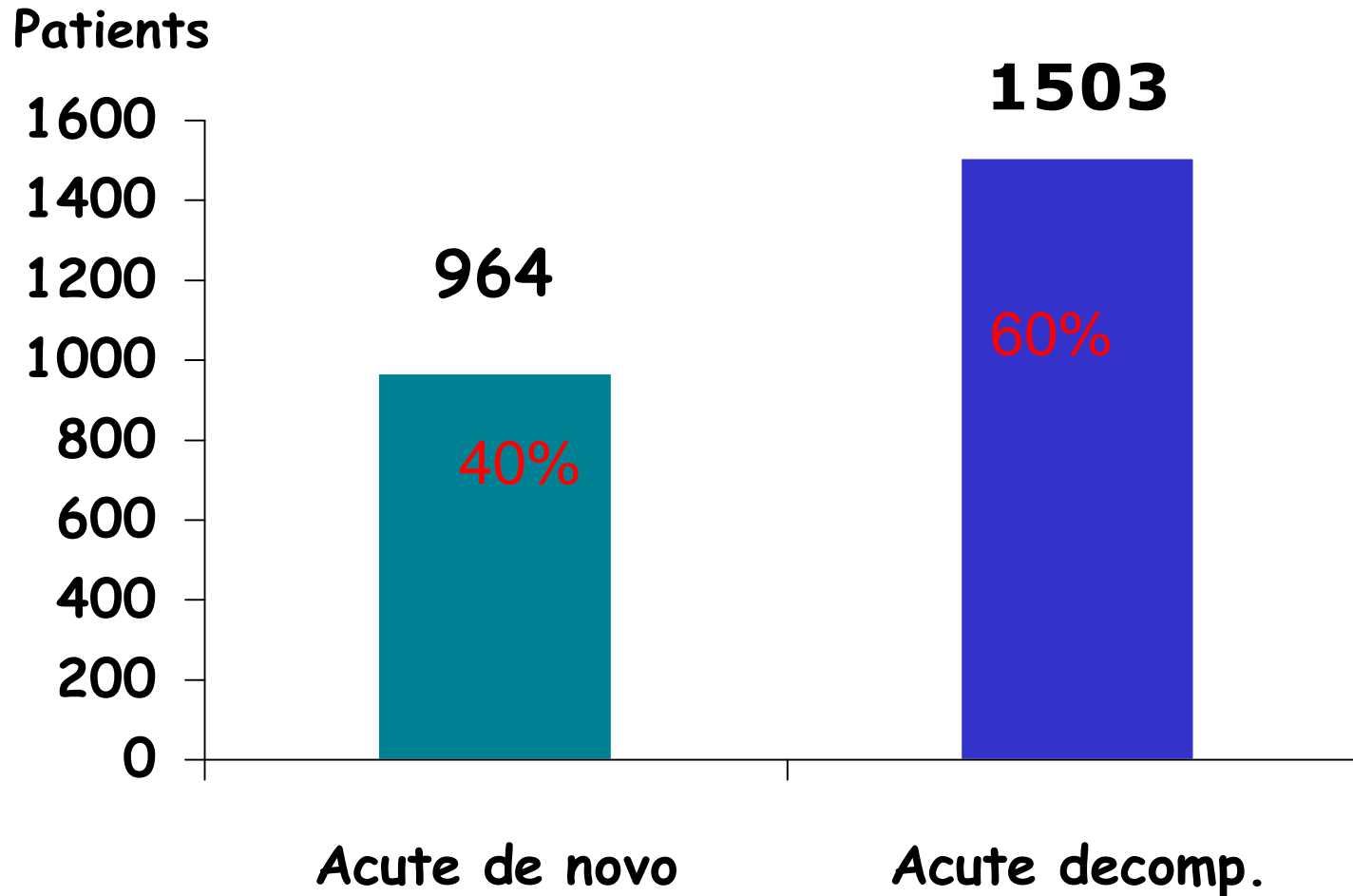
HF II – *Patient Characteristics*

n=2467

	All	Male	Female
Patients	2467	1500 (61%)	967 39%
BMI	26.8	26.7	27.1
Age	72 (63-79)	70 (61-77)	75 (67-82)

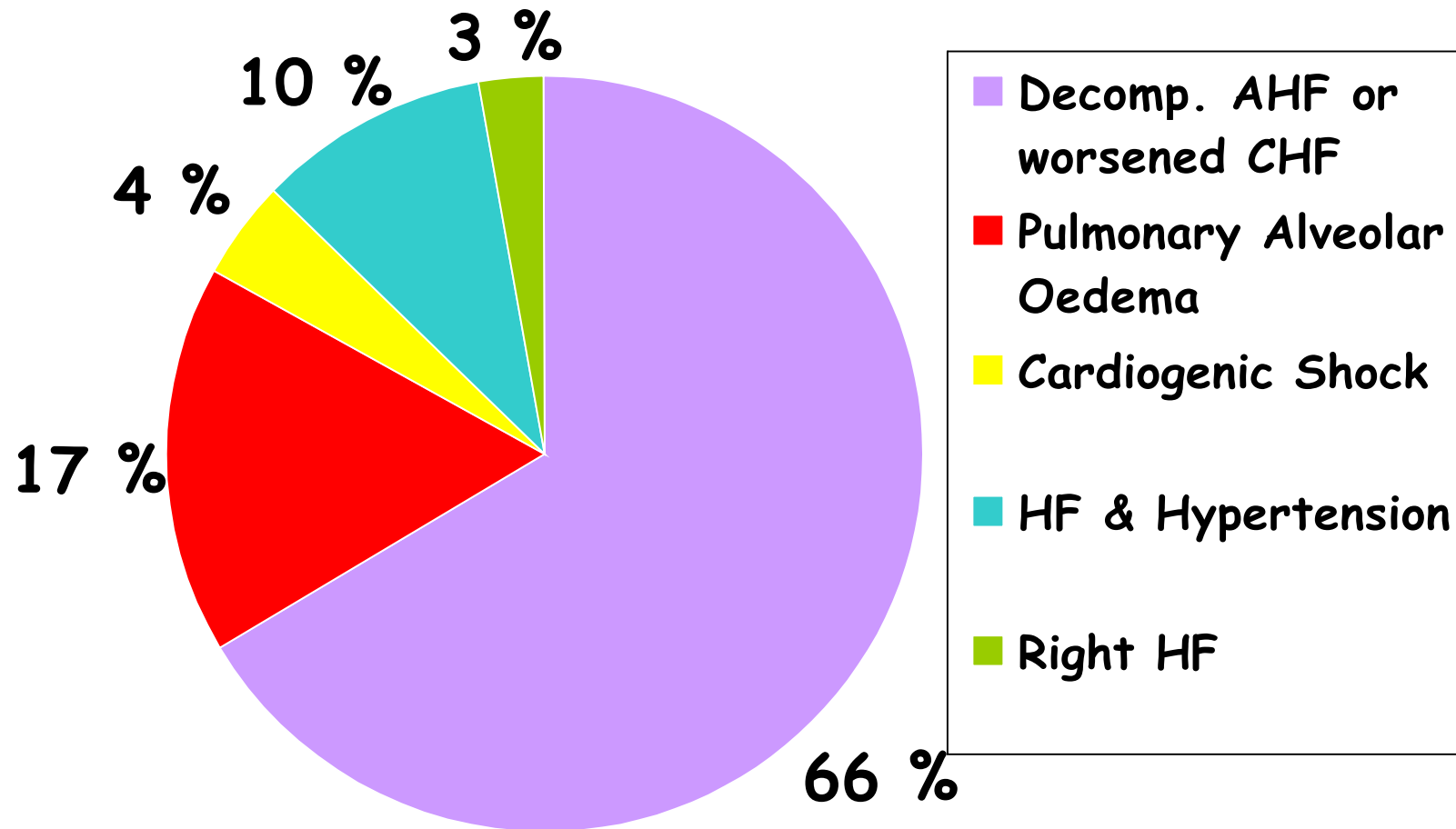
HF II -Type of Heart Failure

n=2467



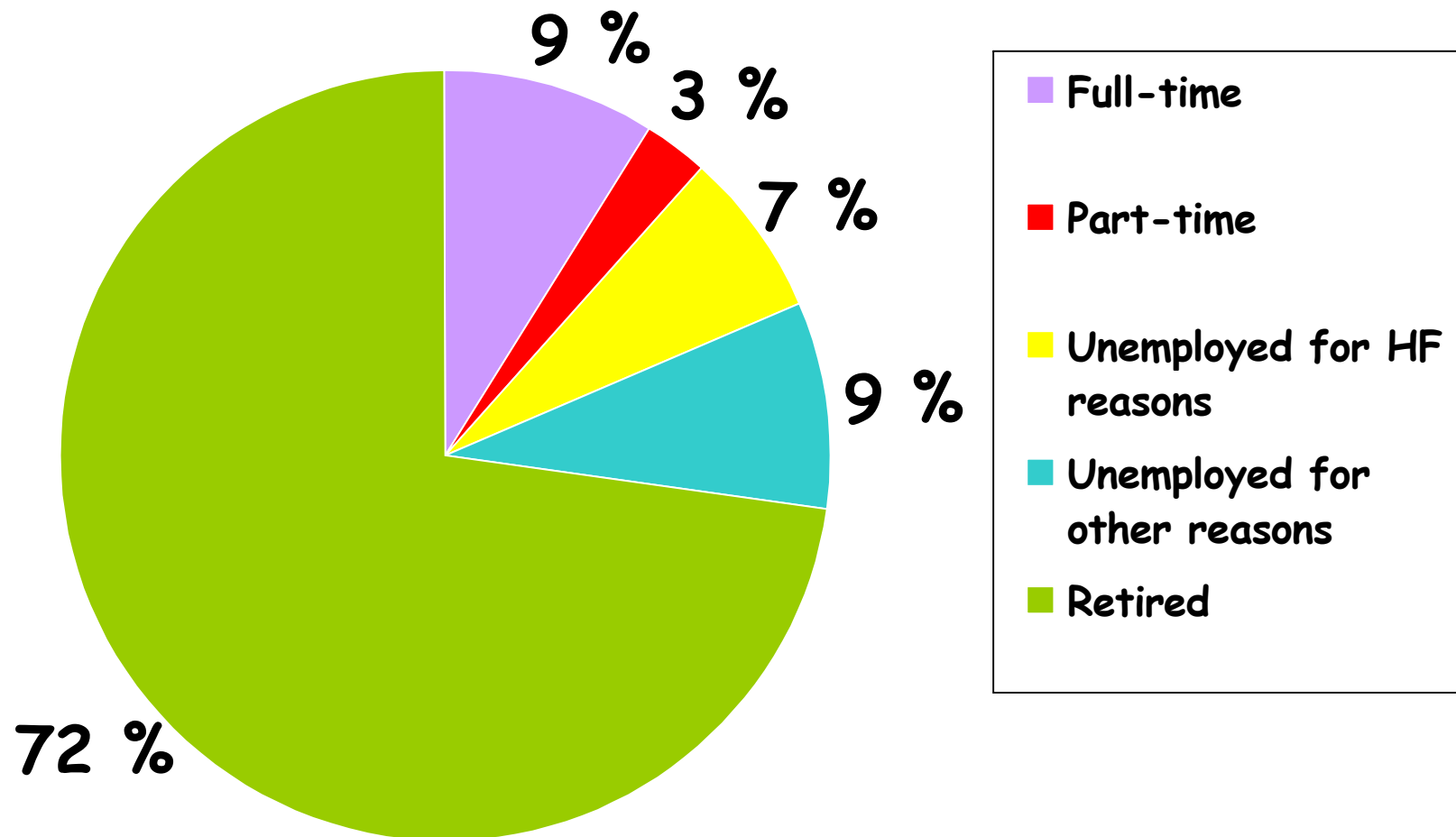
HF II – Classification of Heart Failure

n=2467



HF II – *Employment Status*

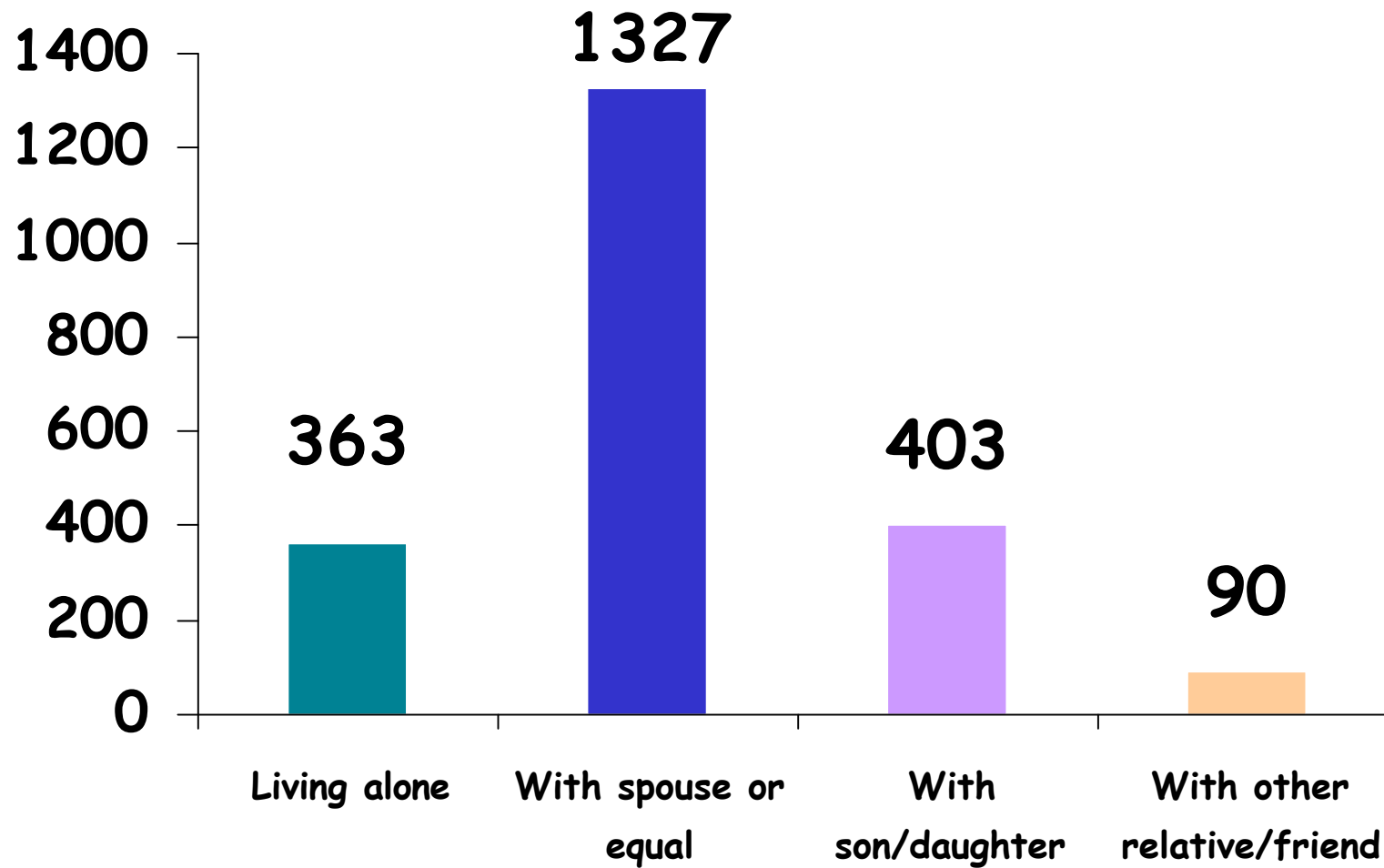
n=2370



HF II – Domestic Status: Own home

n=2246

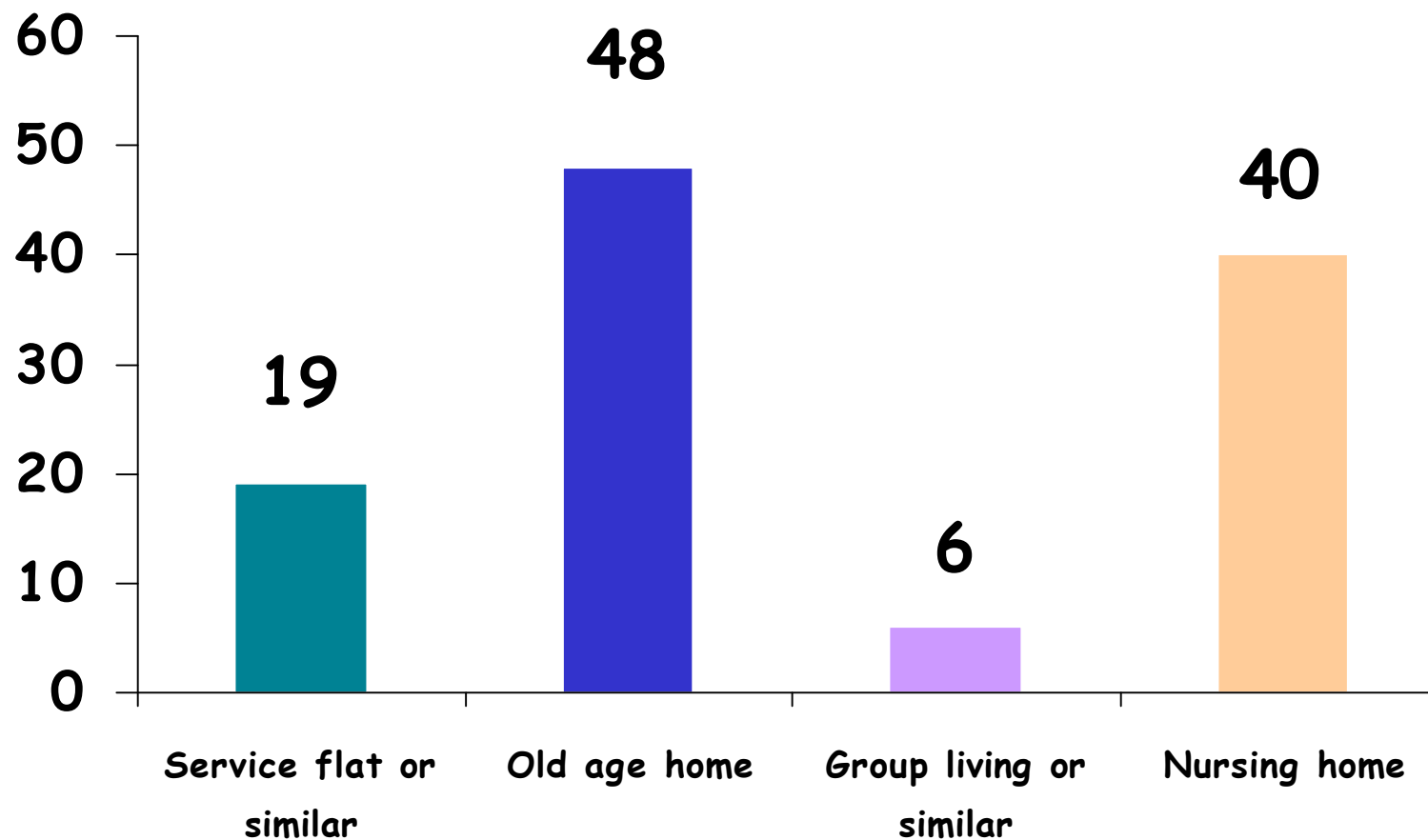
Patients



HF II – Domestic Status: Special accomodation

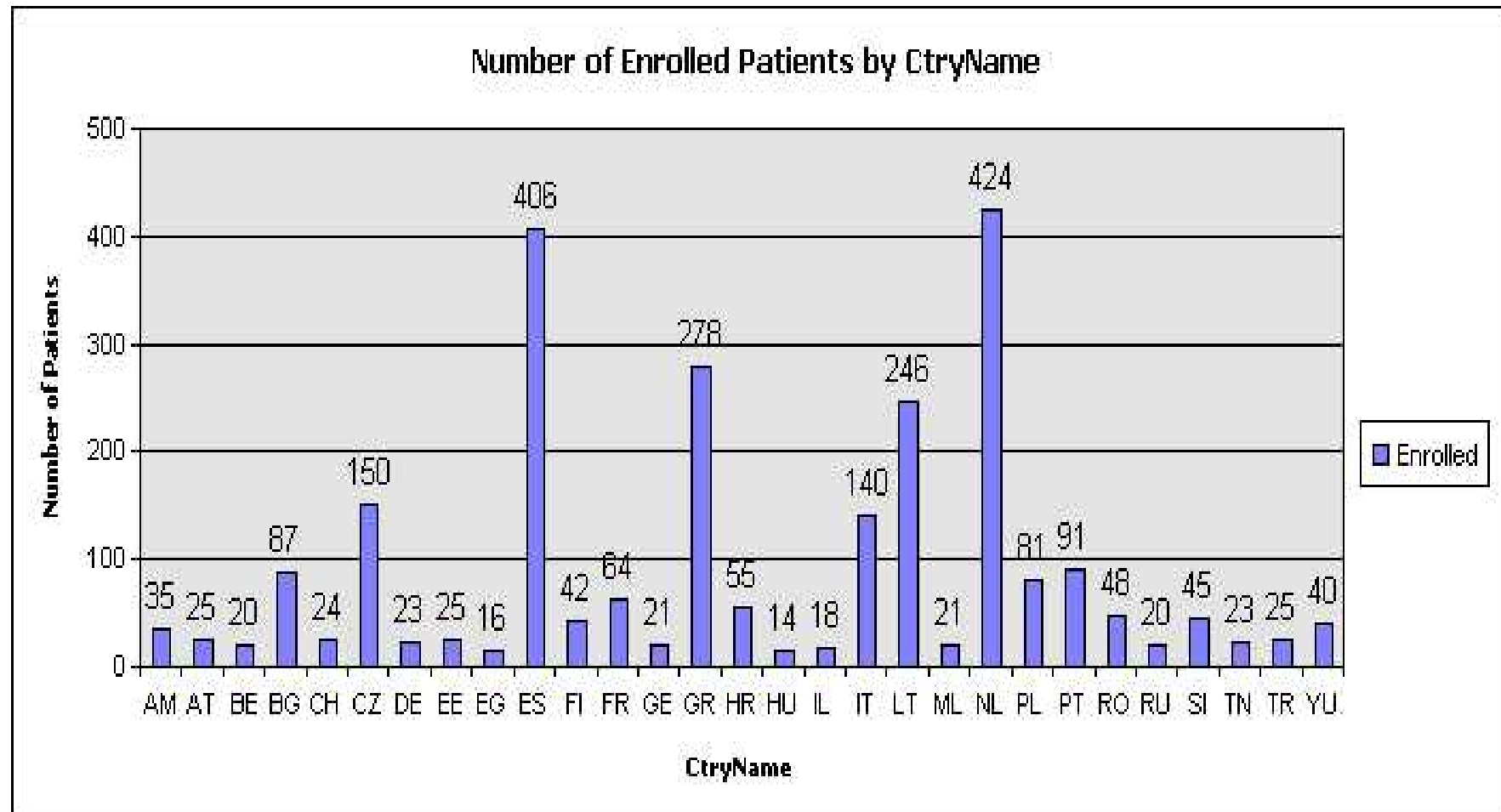
n=113

Patients



Global Status July 29th 05	All Ctrs	G6 Ctrs	G6 % of Total
Potential Centres	182	65	35
Active Centres (enrolled > 1 patients)	122	40	32
All Patients	3288		
Screened/not enrolled			
Enrolled	3018	844	27
Completed (signed off by DCO, may also be locked)	2744	733	26
Locked (includes completed)	2467	650	26
Follow-up complete	2068		
Follow-up lock	1410		

HF II Country and recruitment



Euroheart HF II

Baseline on 2467 pts, preliminary

	All	Male	Female
Number	2467	61%	967
BMI	27,5	27,4	27,8
Age, y	70,5+-8	68+-8	73+-7***
Acute denovo %	40	36	44
Chronic decomp %	60	64	56

Euroheart HF II Baseline on 2467 patients, preliminary

Classification of AHF %	All	Acute	Chronic
Decompensated HF	66	53,7	74,5***
Pulmonary oedema	16,6	24,8	11,4***
Cardiogenic shock	4,2	7,2	2,3***
HF and hypertensive	10,1	11,4	9,2
RV HF	2,8	2,9	2,7

HF II – Employment status %

Employment:%	All N=2467	Acute N=964	Chronic N=1503	Decomp	Oedema	Shock	Hypertensive	RVHF
Full-time employed	8,9	14,9	5,2***	6,8	11,0	18,3	10,9	13,2
Part-time employed	2,7	2,9	2,8	2,6	2,6	4,8	3,2	
Unemployed due to HF symptoms	6,6	1,1	10,5***	7,8	2,7	1,9	6,85	8,9
Unemployed for other reason	8,6	7,7	9,1	8,4	9,3	7,7	6,1	5,8
Retired	72,8	73,4	72,4	70,1	73,7	5,87	69,0	76,9, 1
Unavailable	3,9	3,9	4,0	4,2	0,7	12,5	4,0	2,9

Euroheart – HF II patient demographics

	All	Acute	Chronic	Decomp	Oedema	Shock	Hypert	RV
N =	2467	964	1503	1637	410	104	248	68
Age y mean	70,5	72,7	71,8	70,4	72	66,6*	70,5	70,5
Male %	60,8	56,7	63,9	61,7	57,5	69,2*	58,5	52,9
BMI: mean	26,8	27,1	26,8	27,4	27,4	27	28,7	27,1

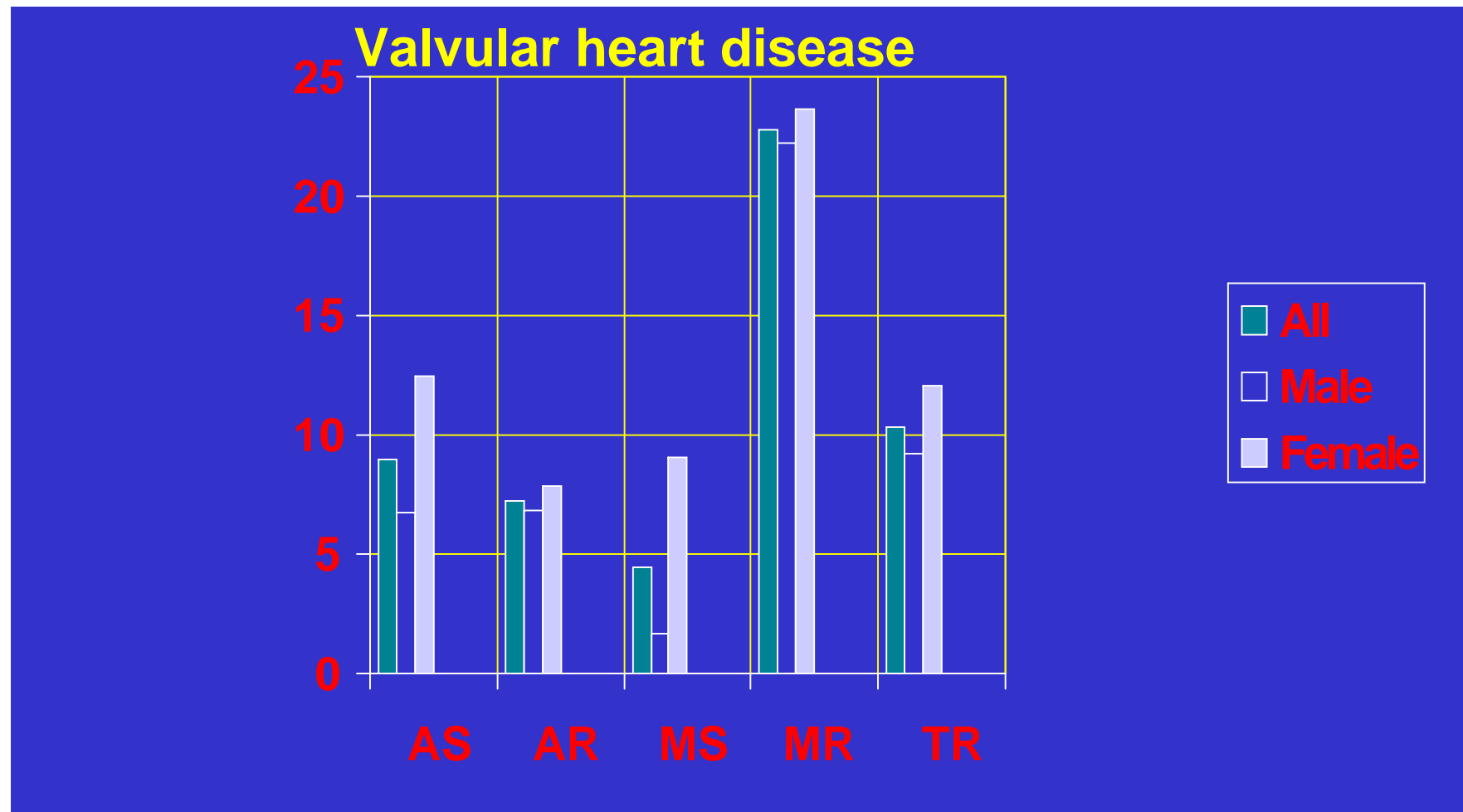
Euroheart survey II, Presentation, baseline

- Own home 91%
- Special accomodation 5%
 - old age home
 - group living or similar
 - nursing home

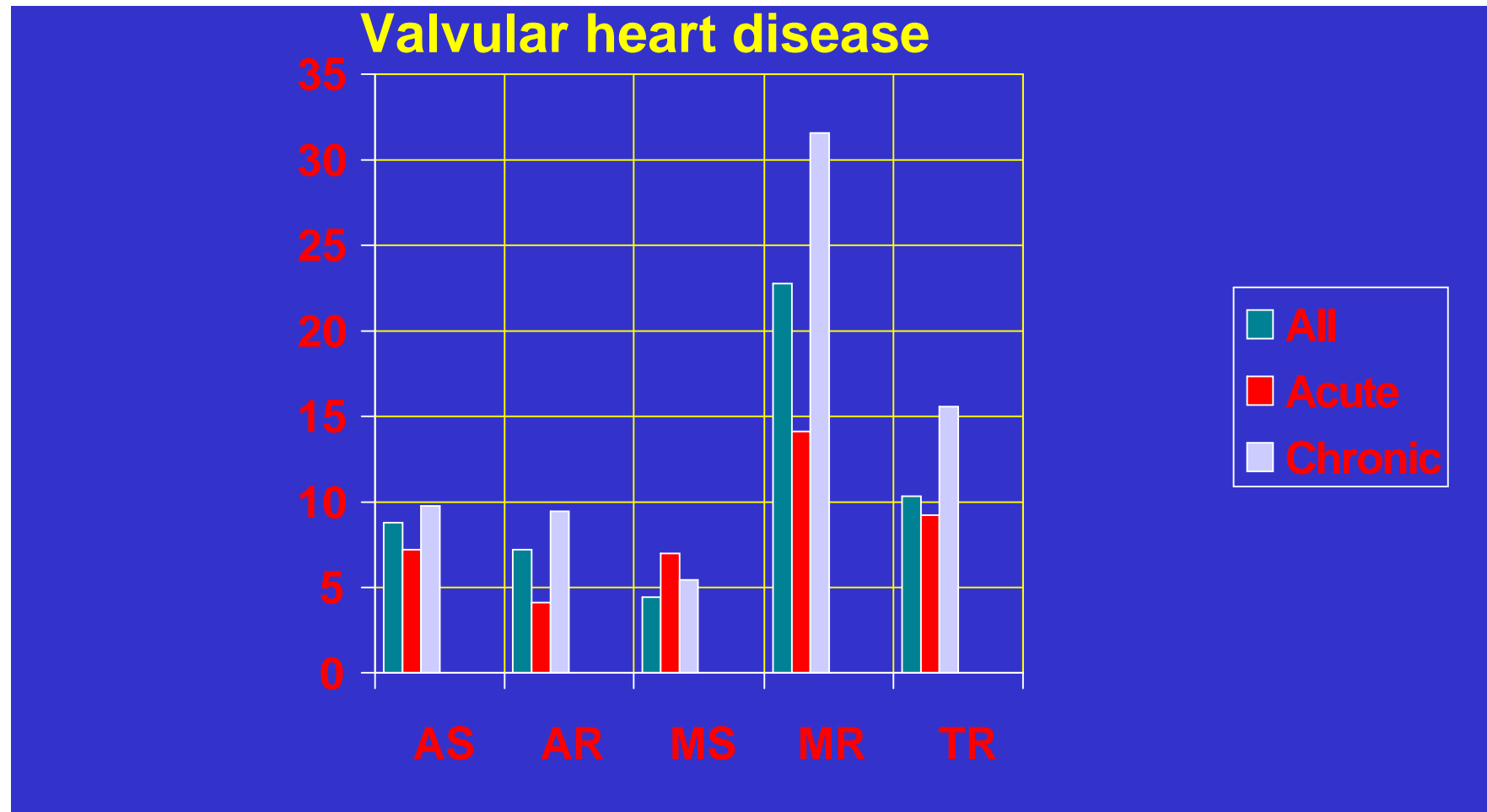
Background diseases

	All 2467	Acute 964	Chronic 1503	Decomp	Oedema	Shock	Hypert	RV
Hosp during last year	42,6	10,6	63,5***					
Prev AMI	34,8	24	41,8	36,7	36,3	34,6	25,4	14,7
DCMP	17,1	9,4	22,1***					
AF/Flu	39,1	24,7	48,3***	41,1	31,4	27,9	37,5	58,8* *
Hypertension	63,2	59,3	66,7*	55,8	73,9	51,0	92,7	50
Valv. dis.	32,5	18,2	41,7***	36,3	26,1	19,2	20,2	42,7

Euroheart HF II Baseline on 2123 patients, preliminary



Euroheart HF II Baseline on 2123 patients, preliminary



Background Lifestyle and Quality of life

	All	Acute	Chronic
	2467	964	1503
Anxious or depressed	56,9	48,8	60,9***
Visual analog	50	60	45***
Current Smoker	15,9	22,3	12,0***
Current+former smoker	58,0	58,4	57,7

Background diseases

	All 2467	Acute 964	Chronic 1503	Decomp	Odema	Shock	Hypert	RV
COPD	18,9	14,9	21,4***	18,6	21,2	14,4	17,7	22,1
Diabetes	32	30,3	33,4	30,5	39,2	28,8	35,4	22,0
Renal failure	16,7	11,5	20,0***	16,0	17,1	16,4	21,4	13,2
Anemia	12,9	10,7	14,3**	12,9	13,4	12,5	12,1	11,8
TIA or stroke	13,9	11,9	15,2**					
Thyroid disease	7,1	4,5	8,7***	7,6	5,4	3,9	7,3	8,8

Presentation diseases

	All 1467	Acute 963	Chronic 1503	Decomp	Oedema	Shock	Hypert	RV
ACS	31.4	43,1	24,0***					
UAP	8,4	6,5	9,6***	7,9	9,3	3,8	13,3	4,4
ACS STMI	12,4	21,0	6,8***	9,2	18,1	60.0	5,6	7,4
ACS non STMI	10,6	15,4	7,4***	8,8	22,0	12,5	4,9	4,4
Arrhythmia AV	32,4	31,9	32,7	29,1/ 3,2	24,2/ ,9	16,3/14, 5	31,5/1, 2	29,4/7, 3
Pneumonia	8,0	7,4	8,3*	7.8	8,6	5,8	10,1	4,4
Non-compliance	19,5	5,5	32,9***	21,3	16,6	4,8	20,6	11,8

ECHO AND BNP

	All 1467	Acute 964	Chronic 1503	Decomp	Odema	Shock	Hypert	RV
LVEDD	58,0	54	59***	58,6	55,9	54,4	54,6	49,3
EF	35,0	40.0	35,0***	45,7	42,9	45,3	40,7	36,9
BNP	896,5	452,0	1180*					
Pro BNP	3660	2646	3814					

HF II

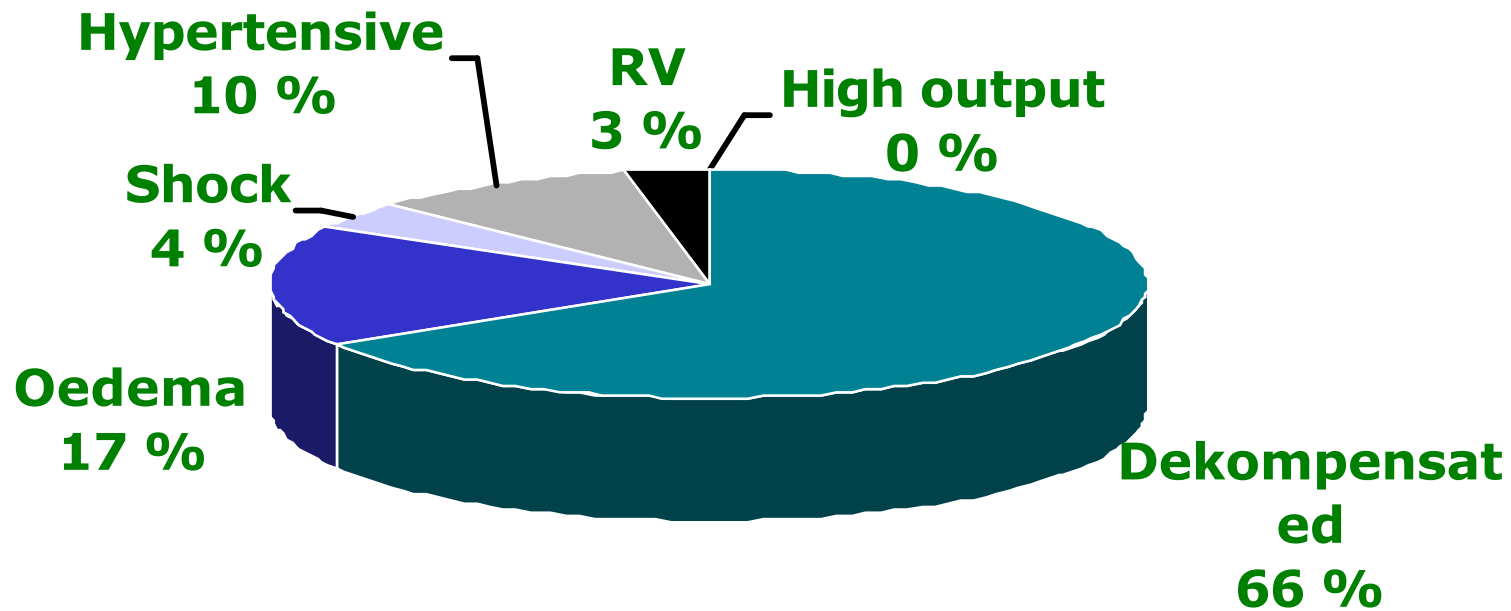
- ECHO performed in c 80 %
 - **Diastolic dysfunction frequent in 80%**
- BNP or pro nt BNP done in 15 %
- Coronary angiography results known in 38,4%

Heart failure (%)	United States ADHERE	Euro Heart Failure Survey	EHS-HFII 2005	FINNAKVA 2005 AHF
Prior/ New onset/ Cardiogenic shock	75/23/2	65/27/1	60/40/4	51/49/2
LVEF < 0.4 (%)	59	46	45	47
Co morbidities (%)				
Coronary artery disease	57	68	60	55
Hypertension	72	53	56	55
Diabetes	44	27	32	33
Atrial fibrillation	31	43	33	27
Anemia (Hgb. < 12	40	30	13	
Pacemaker/ICD	20	9		
Renal insufficiency (Cr. > 2 mg/dL)	30	17	16,7	
Hyponatremia (Na < 136 mEq/L)	21	20		

CONCLUDING COMMENTS

Presentation of severity

40% acute denovo, 60% decompensated chronic



CONCLUDING COMMENTS

- Acute heart failure is a frequent encounter at emergency
- 1/3 of pts present with ACS
- 1/3 with Atrial or ventricular arrhythmia
- 1/3 as with infection or are noncompliant

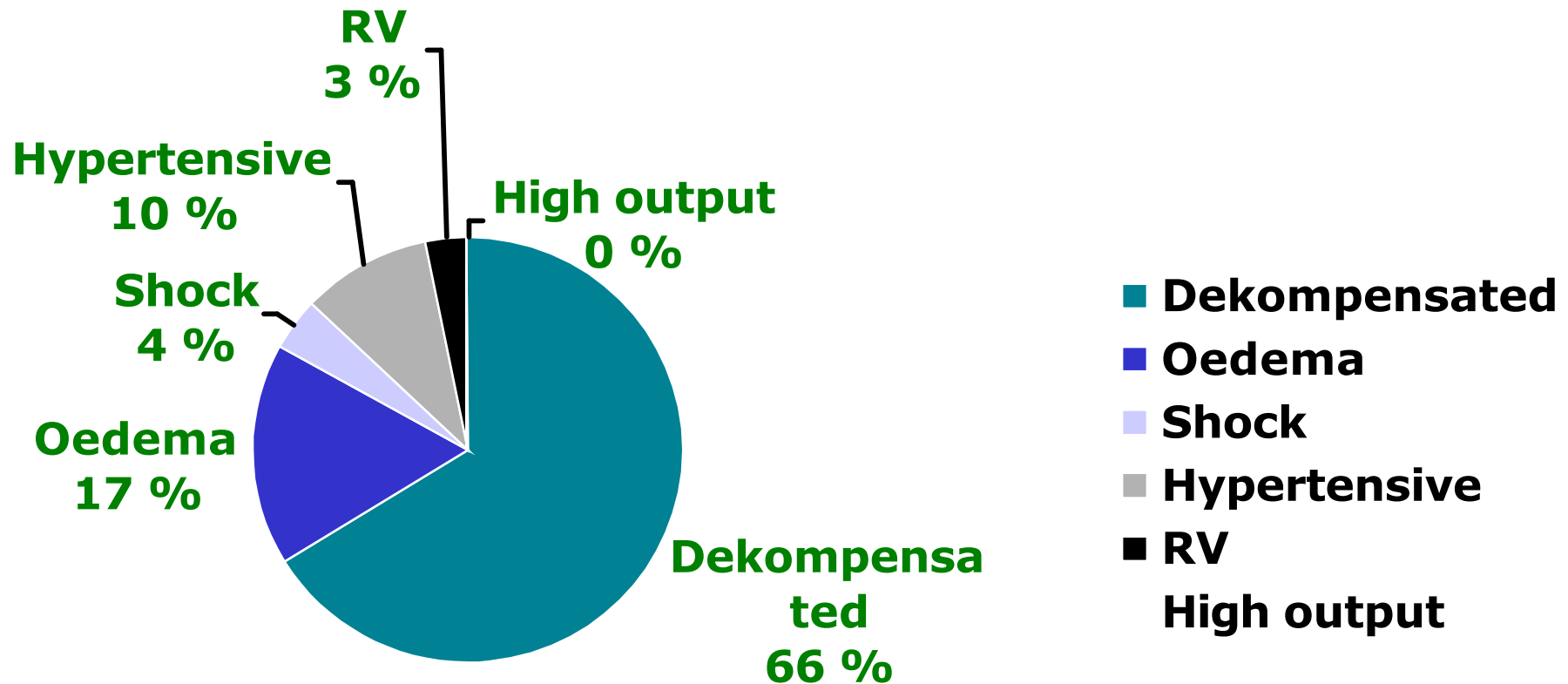
CONCLUDING COMMENTS

- CAD is the main background illness in 60%
- Diabetes is frequent in 32% and
- COPD prevalent in 19%,
- Renal disease in 17%,
- Anemia in 10 %

Interesting data on presentation

- BNP or Nt pro BNP known in 15%
- ECHOCARDIOGRAPHY performed or known in 80%
- ANGIOGRAPHY known in 39% of pts

CONCLUDING COMMENTS



PRESENTATION AT HOSPITALIZATION

	All 2467	Male 1500	Female 967
Dead at discharge %	7,2	6,4	8,4
AMI %	3,6	3,7	3,4
Stroke %	0,9	0,9	1,0
Hospitaliz d	9	9	9
Lost during fu	3,2	3,2	3,0
Death d fu	9,7	9,8	9,5