

ESADA - The European Sleep Apnea DAtabase

Gothia Forum, 2009

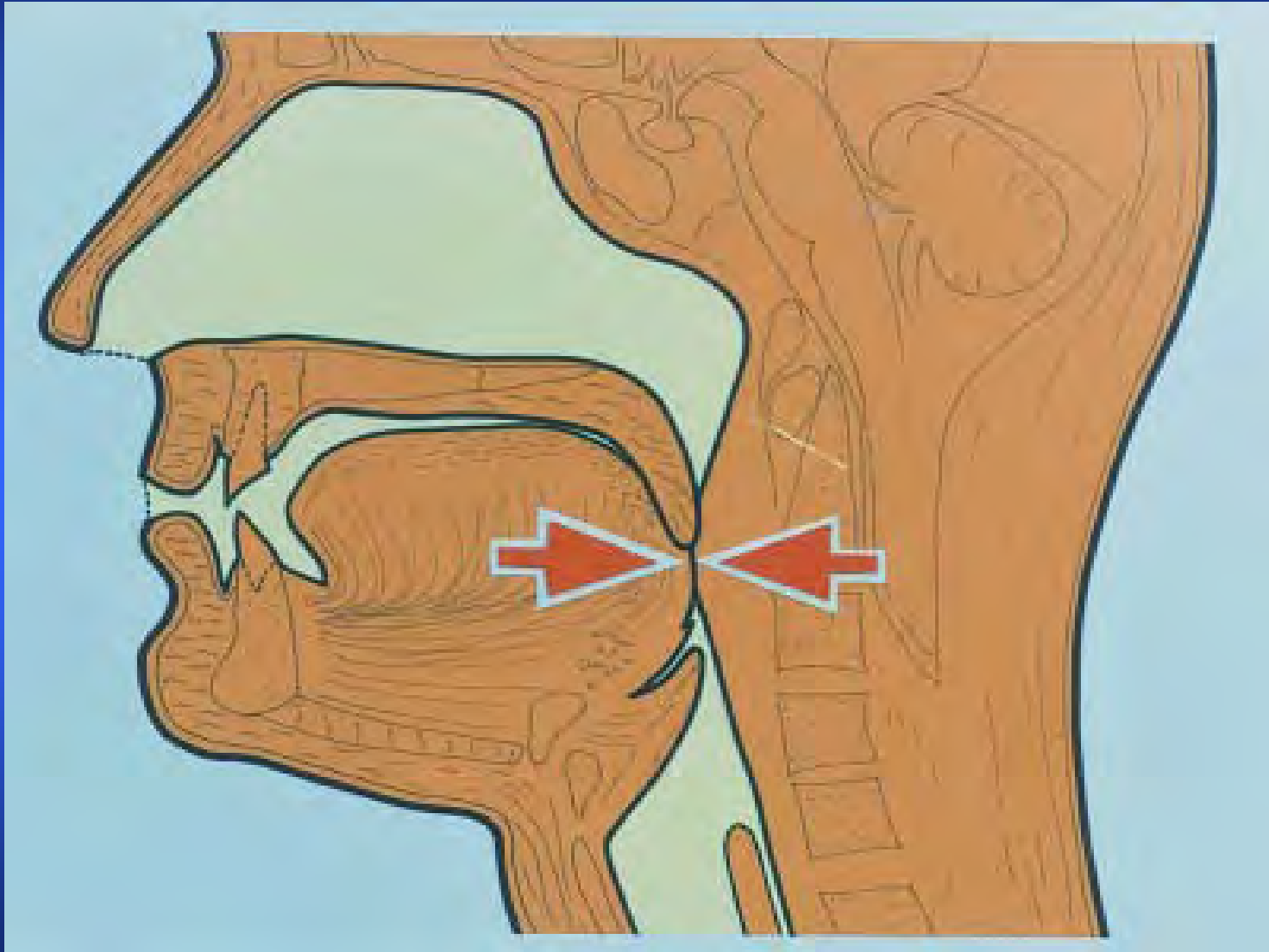


*The Sahlgrenska Academy
at Göteborg University*



GÖTEBORG
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OSA – obstruction of the upper airway



Sequele: Hypoxia, hemodynamic changes and sleep fragmentation

OSA – spectrum of morbidity

Daytime hypersomnolence

- QoL
- traffic and workplace accidents
- cognitive dysfunction
- loss of productivity

Cardiovascular disease

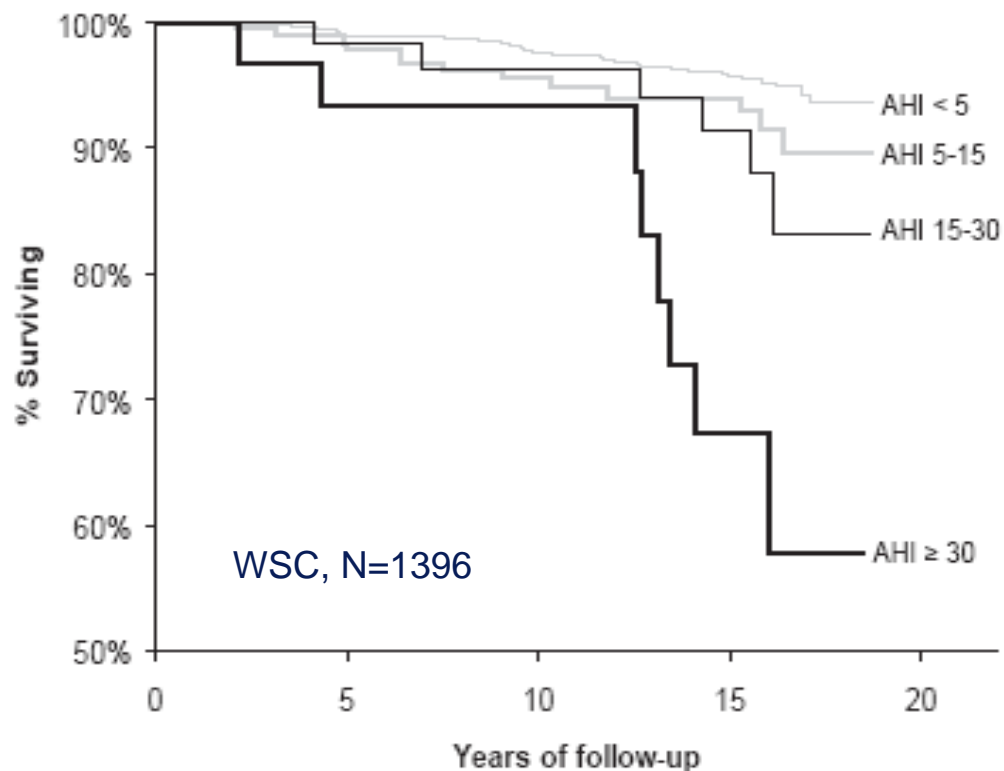
Metabolic disease



OSA and traffic accident

Retrospective/case-control studies

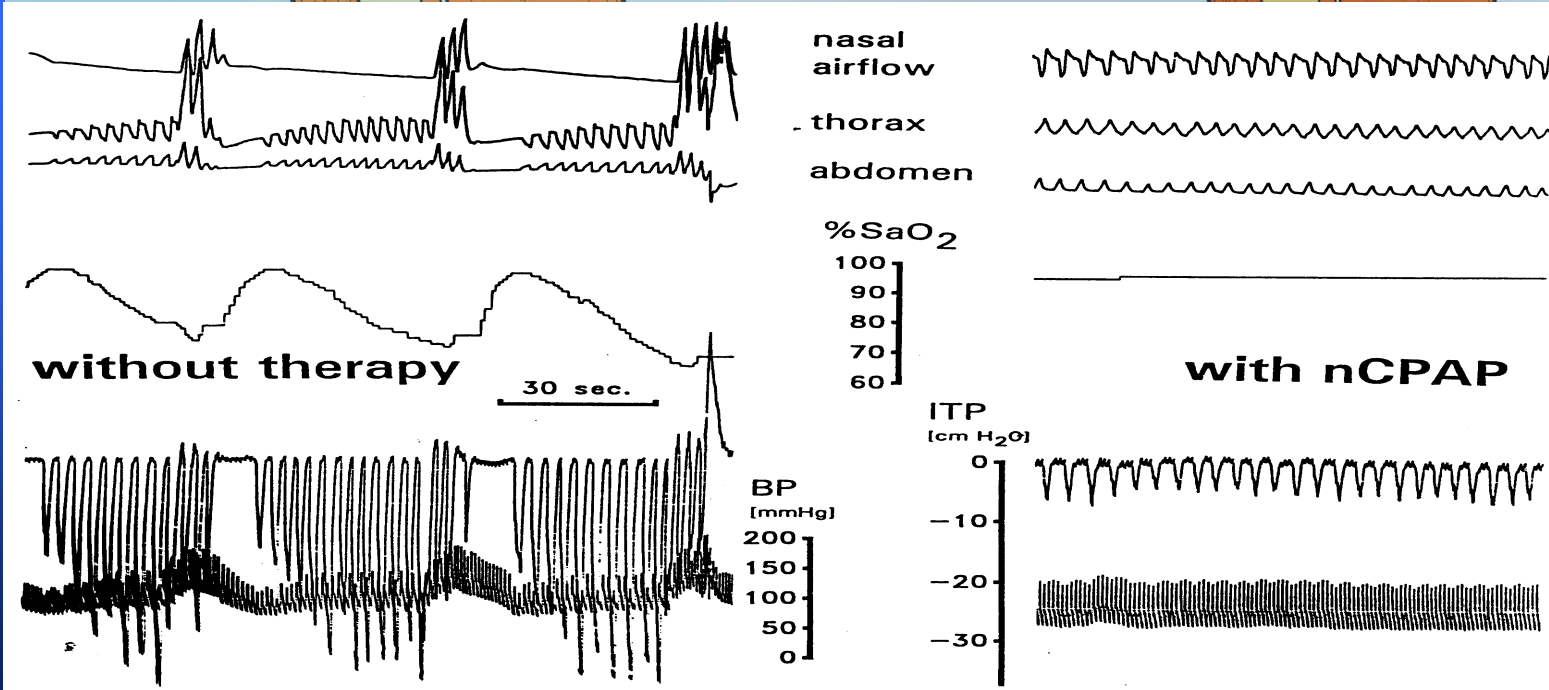
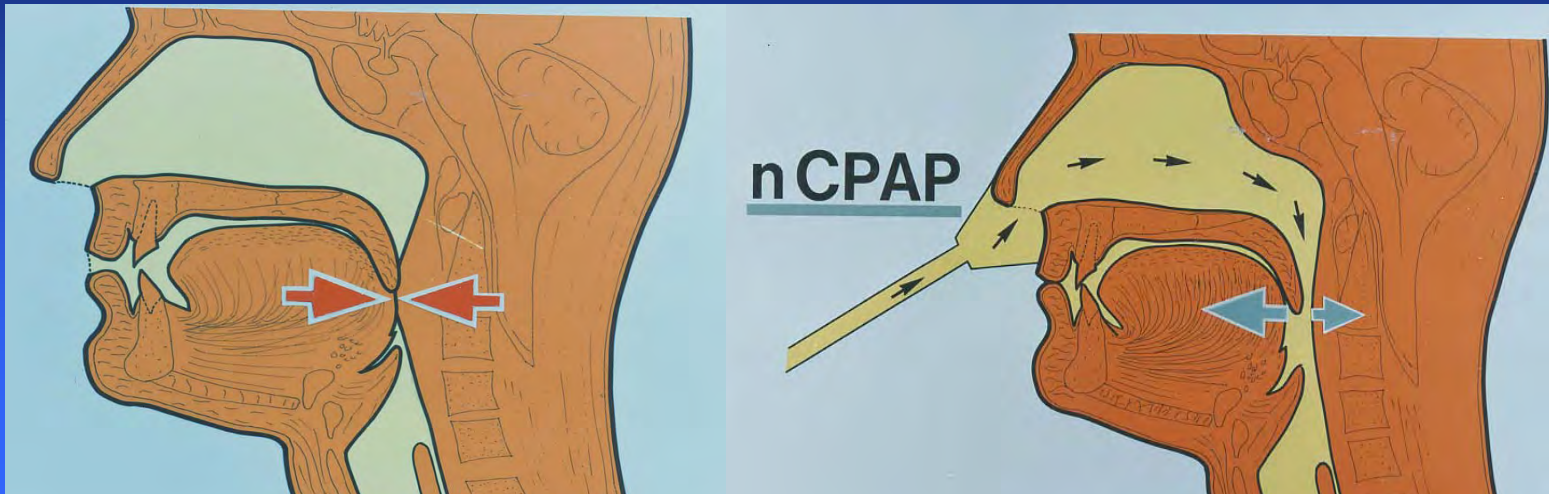
OR: 2.6-11.1



Baseline AHI category	All-cause mortality Hazard Ratio (95% CI)	Cardiovascular mortality Hazard Ratio (95% CI)
None: 0 - < 5	Reference	Reference
Mild: 5 - < 15	1.4 (0.7, 2.6)	1.3 (0.4, 4.1)
Moderate: 15 - < 30	1.7 (0.7, 4.1)	1.5 (0.3, 7.3)
Severe: ≥30	3.8 (1.6, 9.0)	5.2 (1.4, 19.2)
	P trend = 0.004	P-trend = 0.03

Young et al., Sleep 2008;31:1071-8

OSA – a treatable condition



Open Clinical and Research Issues in OSA

- Large scale trials searching for intermediate pheno/genotype
- Improved methods for screening/diagnosis
- Outcome of disease and therapeutic intervention
- Impact of coexisting morbidity

Need for a large scale collaborative action

Initiative to join a European network of researchers.

Targets in OSA (action B26):

- to increase public and professional awareness,
- to create guidelines, and
- to initiate new research programs (EU FP7)

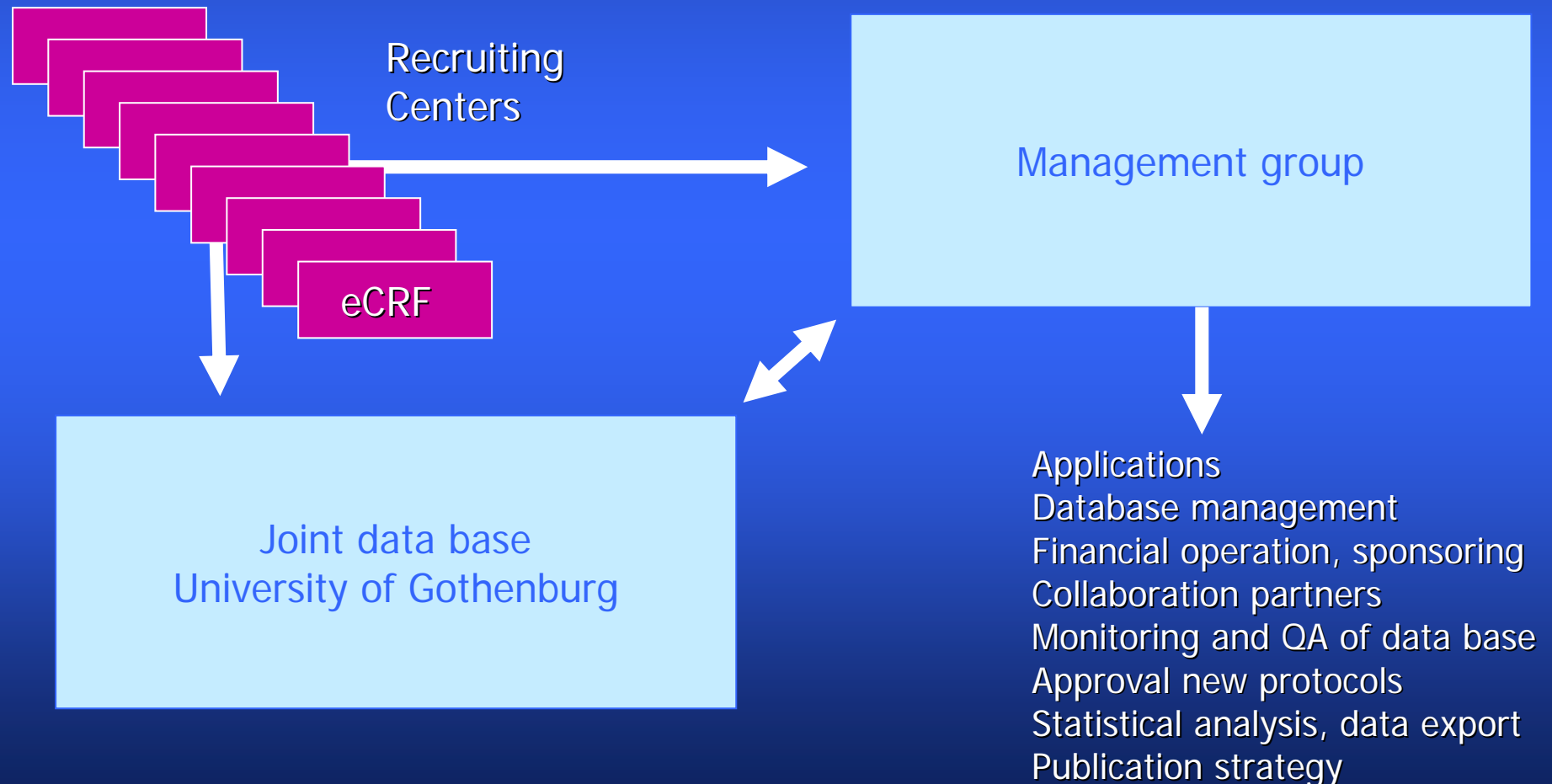
22 European sleep laboratories recruiting patients referred for suspected sleep apnea

Network of researchers representing 16 countries

3 additional laboratories (countries) joining in 2009

ESADA

- Project overview and management



ESADA - Flow Chart

Patients referred to sleep centre with clinically suspected OSA

No Sleep study

Sleep study

Diagnostic Work Up

No OSA

Diagnosis OSA

Treatment allocation

No treatment

CPAP

Surgery

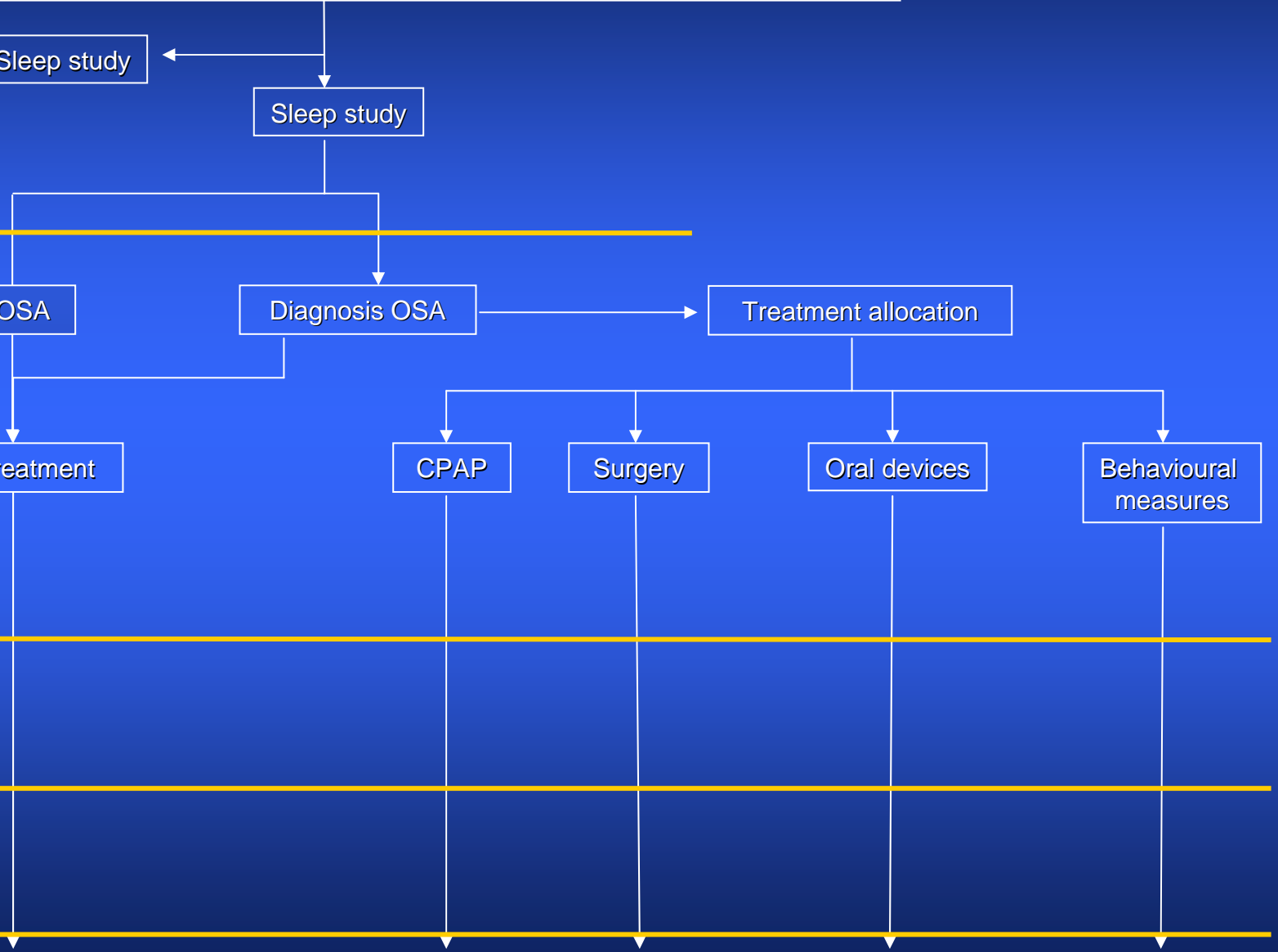
Oral devices

Behavioural measures

Treatment T0

Outcome F-U 1

Outcome F-U 2,3,...)



"Our goal is to generate a Pan European Sleep Laboratory Database for cross-sectional and outcome research in sleep apnea"

The Esada project uses a web based platform for collection of clinical data from patients referred to European sleep laboratories. Specific subcohort protocols linked to the database deal with pathophysiology, genetic mechanisms, neurocognitive, impairment and cardiovascular disease in obstructive sleep apnea.



Participating Sites / Planned Sites:

- Belgium**
Site: **Antwerp**
Web:
- Spain**
Site: **Barcelona**
Web: <http://www.hospitalclinic.org...>
- Israel**
Site: **Beer-Sheva**
Web:
- Germany**
Site: **Berlin**
Web:
- Belgium**
Site: **Brussels**
Web:
- Spain**
Site: **Cáceres**
Web:
- Denmark**
Site: **Copenhagen**
Web:
- Ireland**
Site: **Dublin**
Web:
- United Kingdom**

[Anthropometrics](#)[Questionnaire Data](#)[Blood Test Data](#)[Diagnosis](#)[Drug Treatment](#)[Sleep Diagnostic Test](#)**Anthropometrics**Height: * cmWeight: * kg

BMI: * 28.4

Sitting blood pressure:

Systolic: * mmHgDiastolic: * mmHgHeart rate: bpm

Circumference:

Waist: * cmHip: * cmNeck: * cm*SAMPLE PAGE*

ESADA report pages

- Anthropometrics
- Sleep habits, driving, tobacco, CGI
- Blood test data
- Medical history
- Drug treatment (ATC)
- Sleep study data

- F-U, details and effect of treatment, new events
- ...

Pt ID and labeled samples for genetic analysis stored locally



Patient Data Completeness

Site: User: Last Visit: From: **2007-06-20** To: **2007-08-20** Show: All Red (0-49%) Yellow (50-99%) Green (100%)

Sahlgrenska University Hospital, Gothenburg



95% data completeness

B= Baseline F= Follow Up

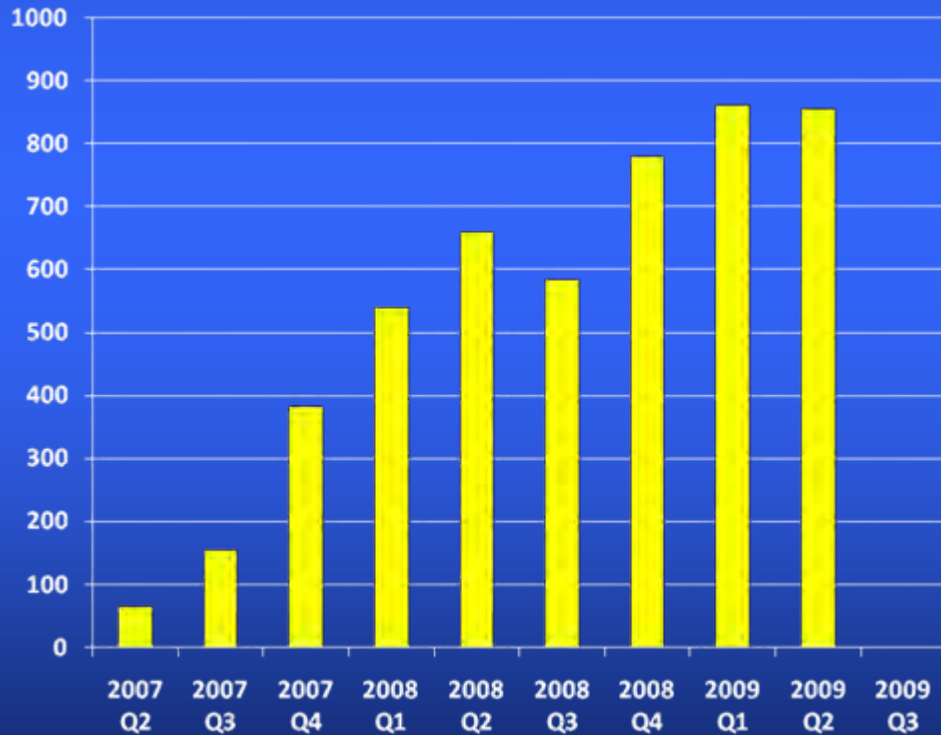
Last Updated: 2007-08-20 07:12:01

Patient ID	Birth Date	Gender	Race	B
46010024	1935-11-14	Male	Caucasian	
46010047	1927-09-02	Female	Caucasian	
46010048	1943-03-17	Male	Caucasian	
46010049	1949-04-02	Male	Caucasian	
46010050	1943-12-31	Male	Caucasian	
46010051	1928-09-20	Male	Caucasian	
46010052	1963-04-14	Male	Caucasian	
46010053	1928-09-26	Male	Caucasian	
46010054	1939-08-12	Male	Caucasian	
46010055	1941-06-26	Female	Caucasian	

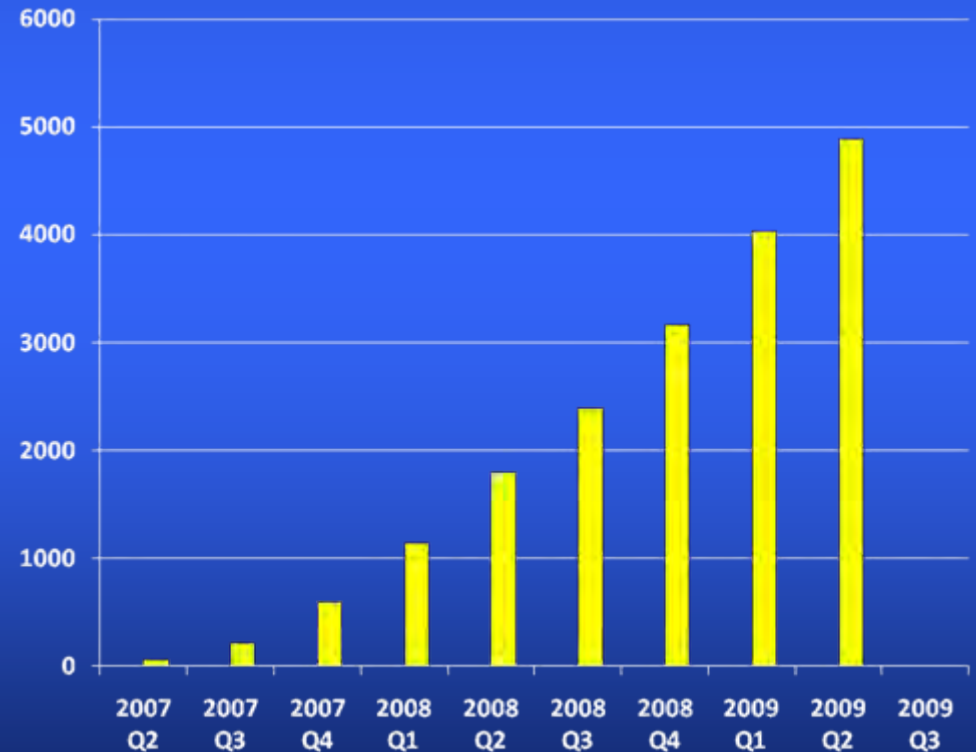
SAMPLE PAGE

ESADA – recruitment 2007-09

Quarterly

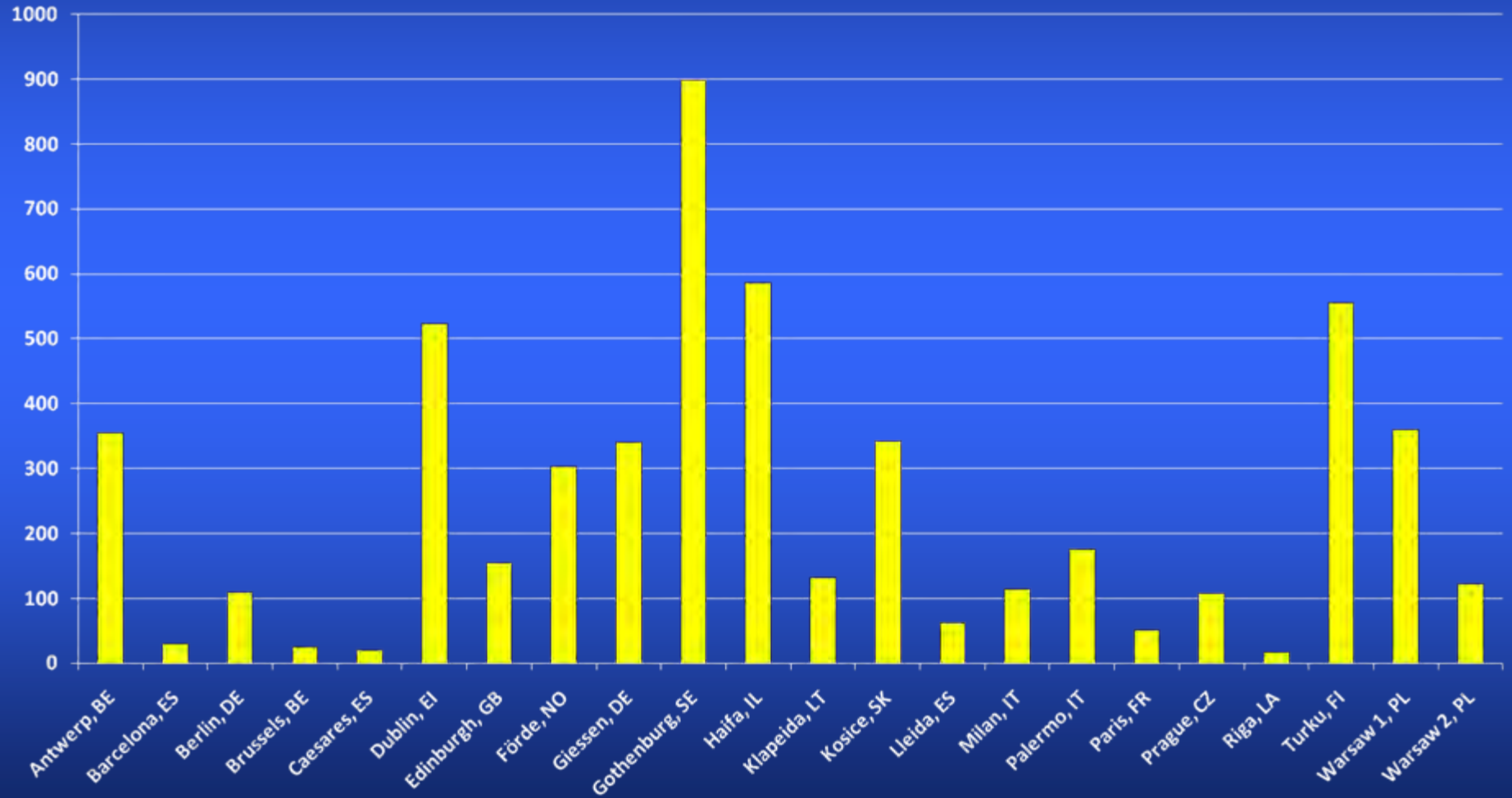


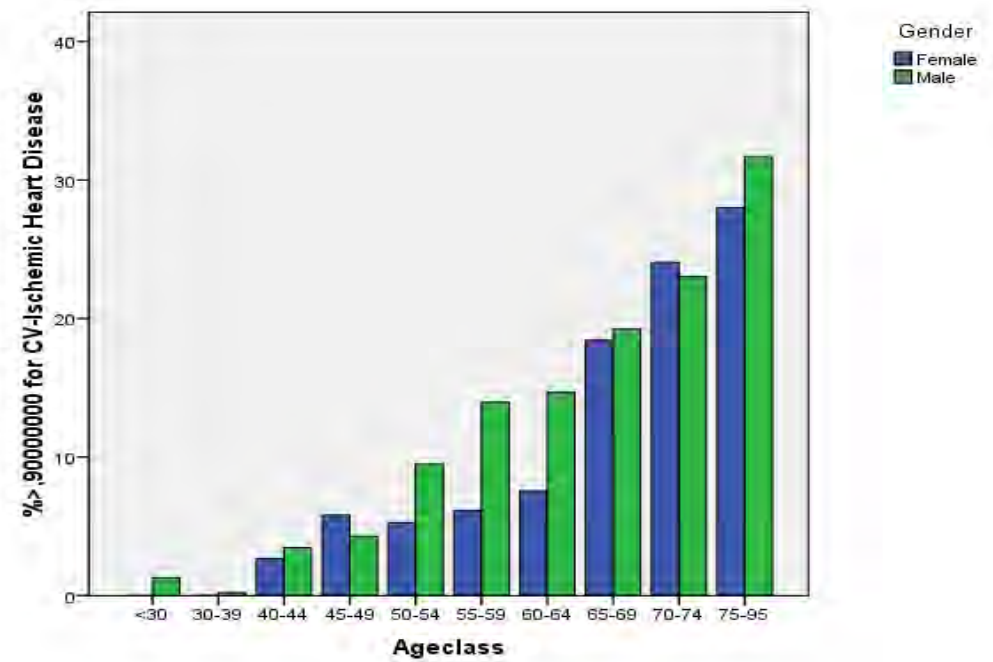
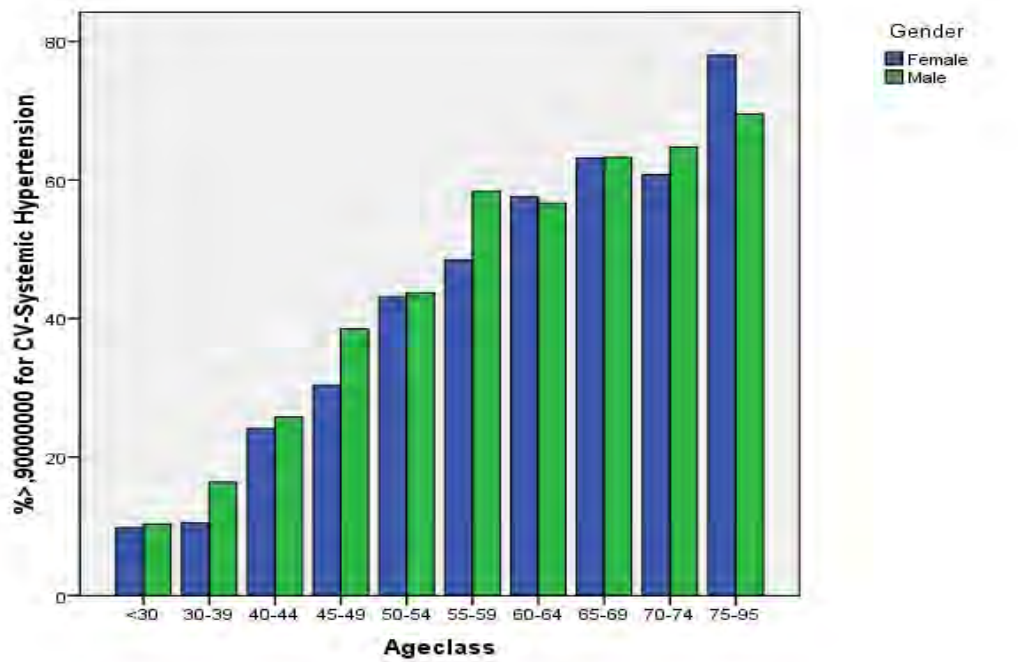
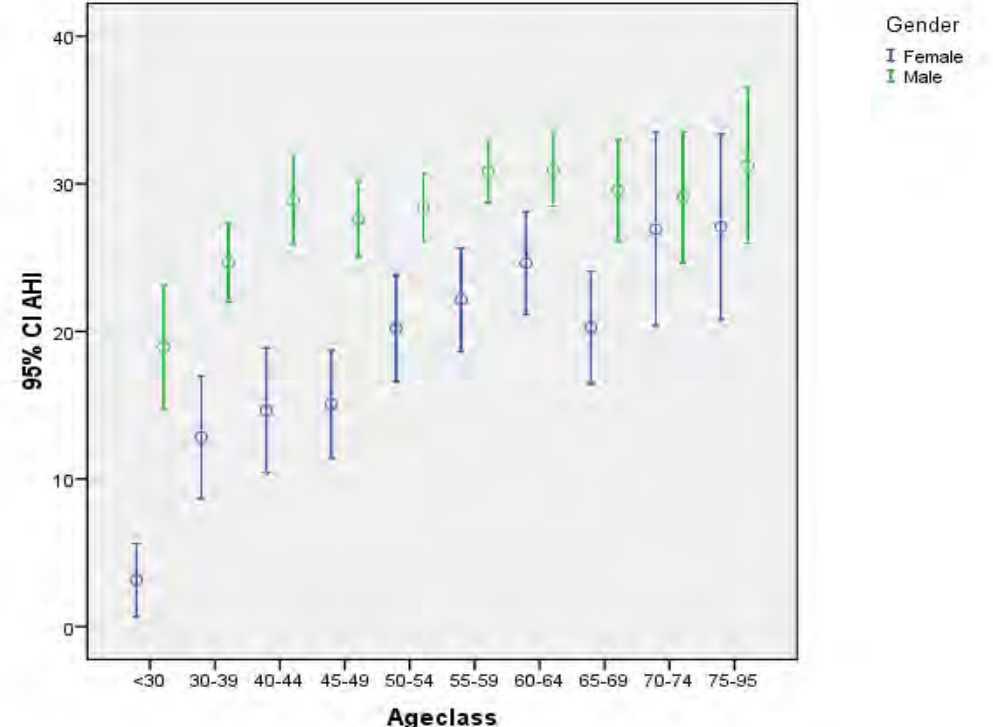
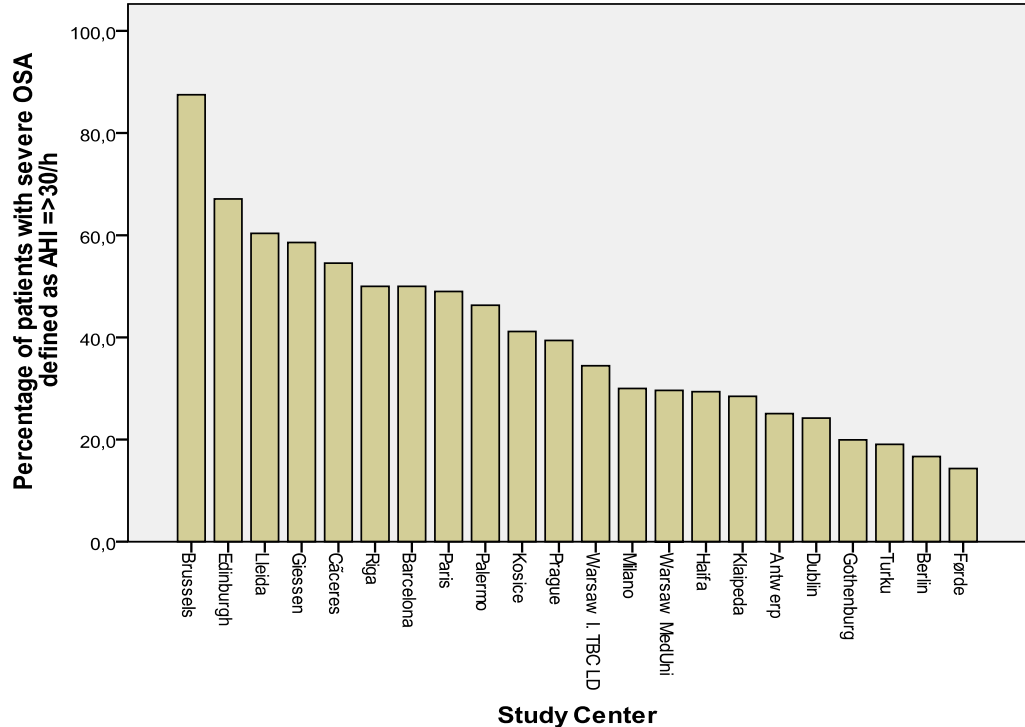
Accumulated



Nov. 1, 2009; 5394 recruited patients

ESADA – recruitment by center





ESADA current status

- Multinational platform for clinical trials and technical development
- Largest prospective data base in sleep medicine
- Transfer of technology and improved standards of care
- First cross sectional data analyses under compilation
- First genetic analysis planned for 2010-11
- Restricted study budget calls for FP7 application