

**A self-administered short questionnaire for the  
routine assessment of health-related  
quality-of-life in patients with  
Chronic Obstructive Pulmonary Disease : VQ11 ©**

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ERI25 INSERM



### Respiratory chronic disease consequences

Deficiency (physiological level) :

Primary at lung level (structure and/or function)

Incapabilities (functional level) :

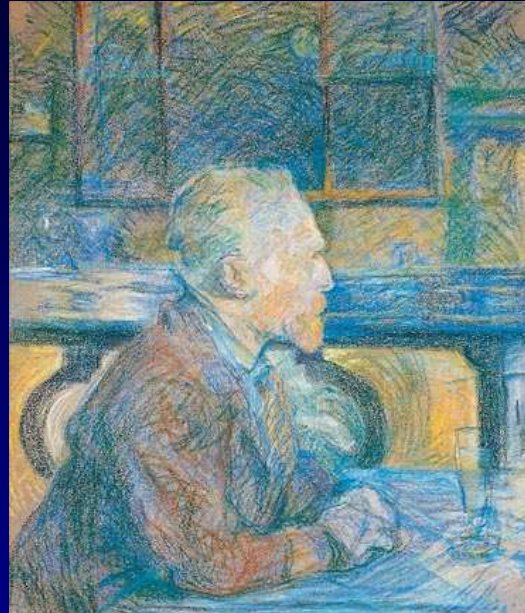
Secondary at organs level

Disability (social level, social participation) :

Tertiary concerning interactions between patients and their environment

(Jones et Kaplan, 2003)

Expert advice



Chronic ill patient advice



(Addington-Hall et Kalra, 2001, BMJ)

### Health

“Health is a state of complete physical, mental and social well-being”  
(WHO, 1947)

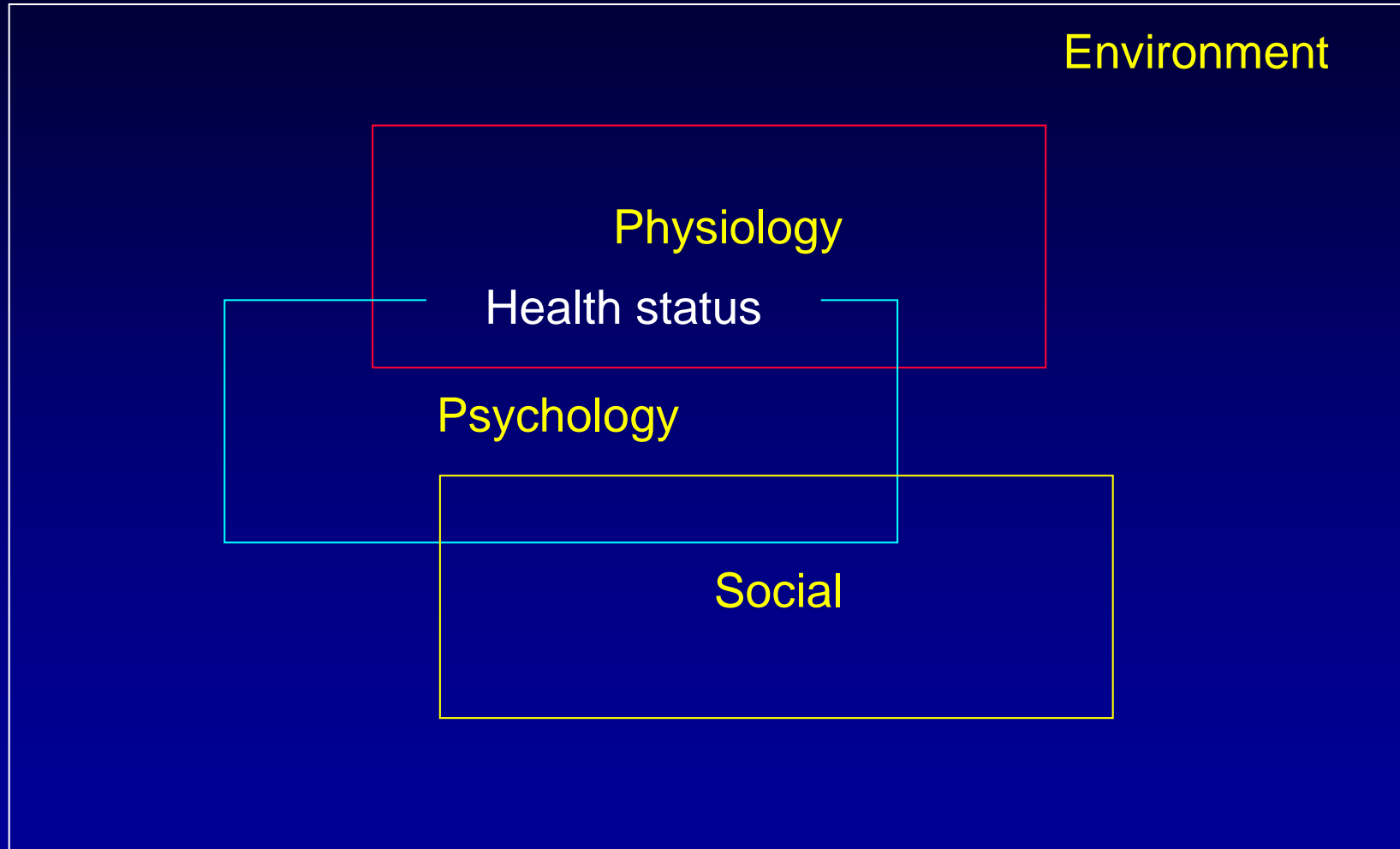
### Quality of life

“An individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns“  
(WHO Working Group, 1994)

### Health-related quality of life

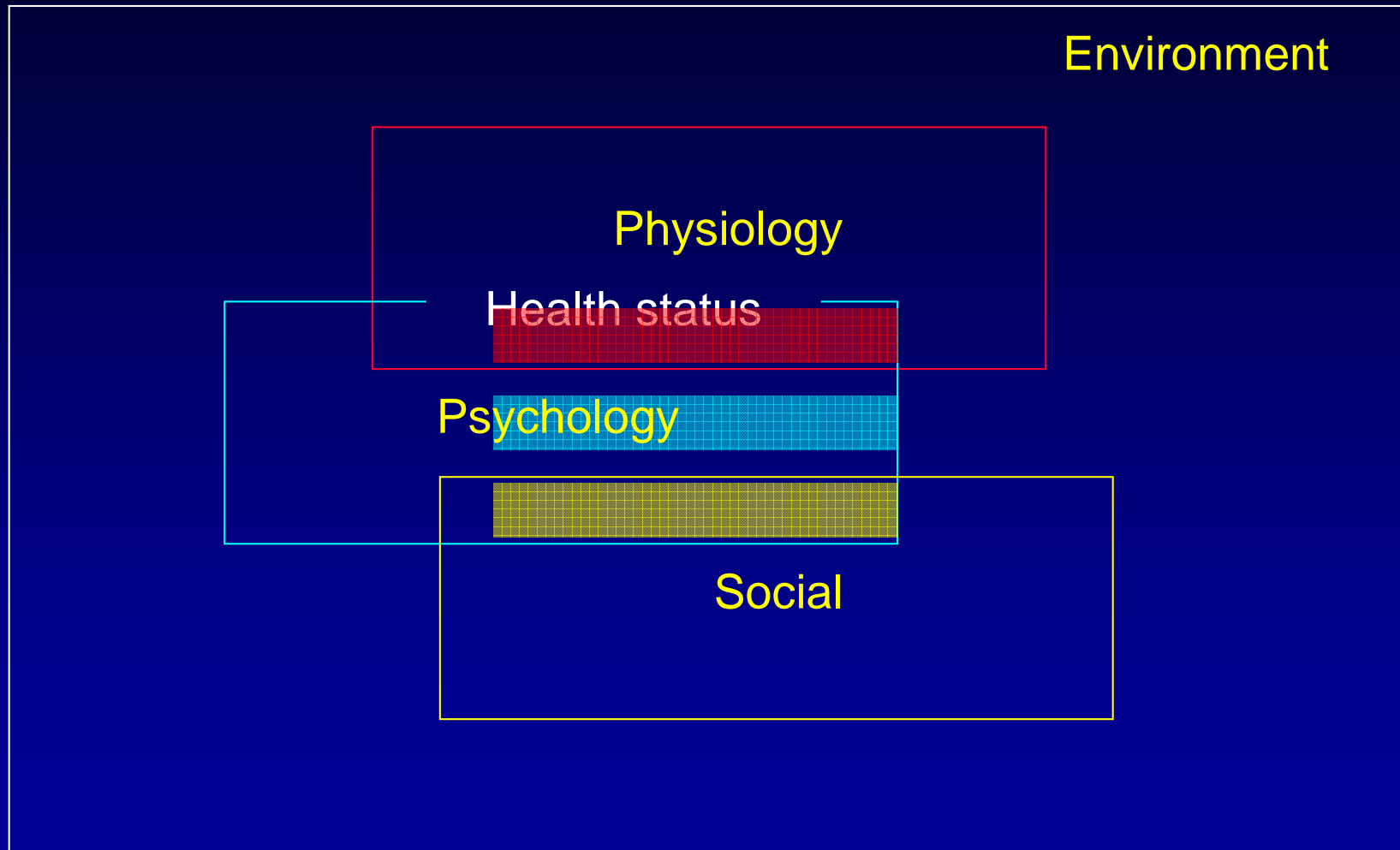
Multidimensional concept that include representations based on health status, physiological state, well-being and life satisfaction  
(MacKeigan et Pathak, 1992)

# COPD health-related quality of life

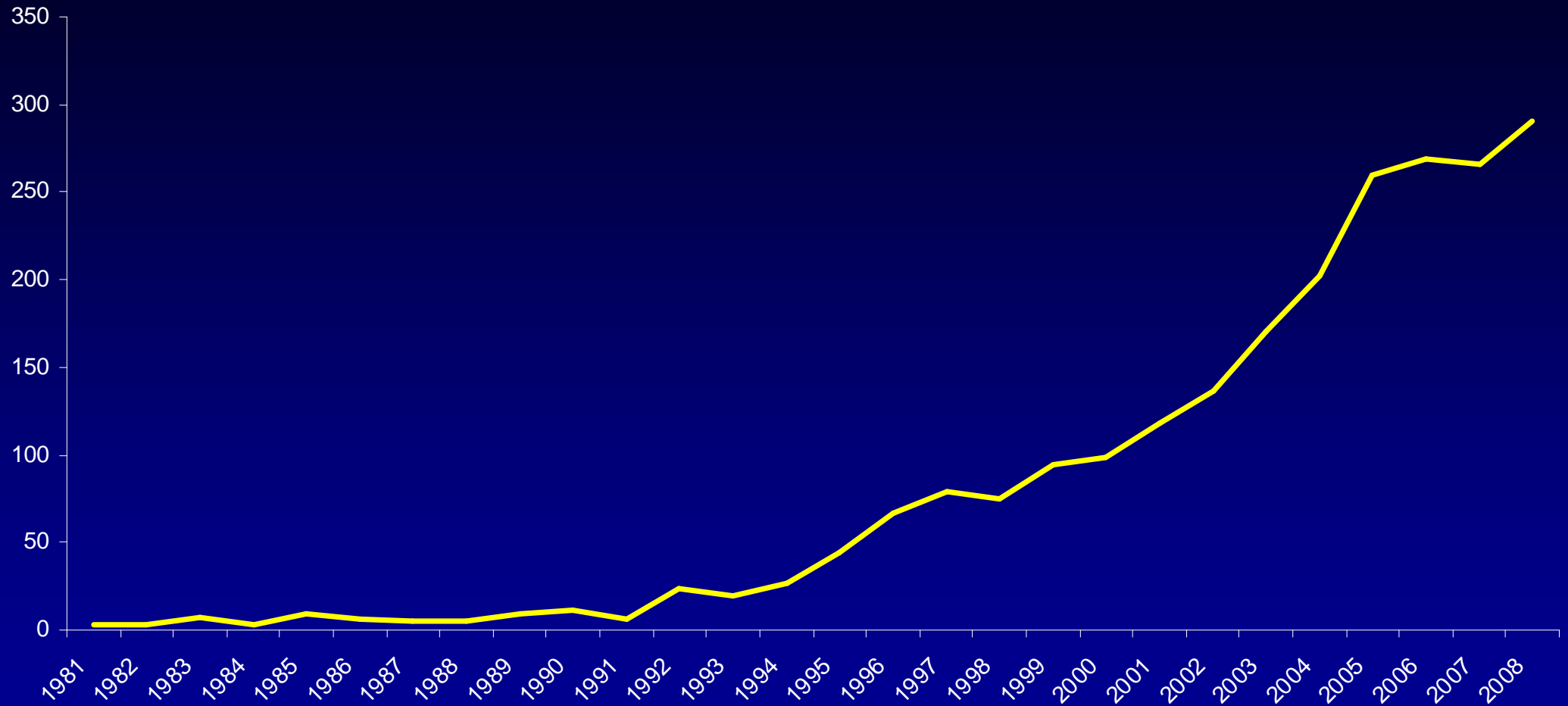


(Curtis *et al.*, 1997, AJRCCM)

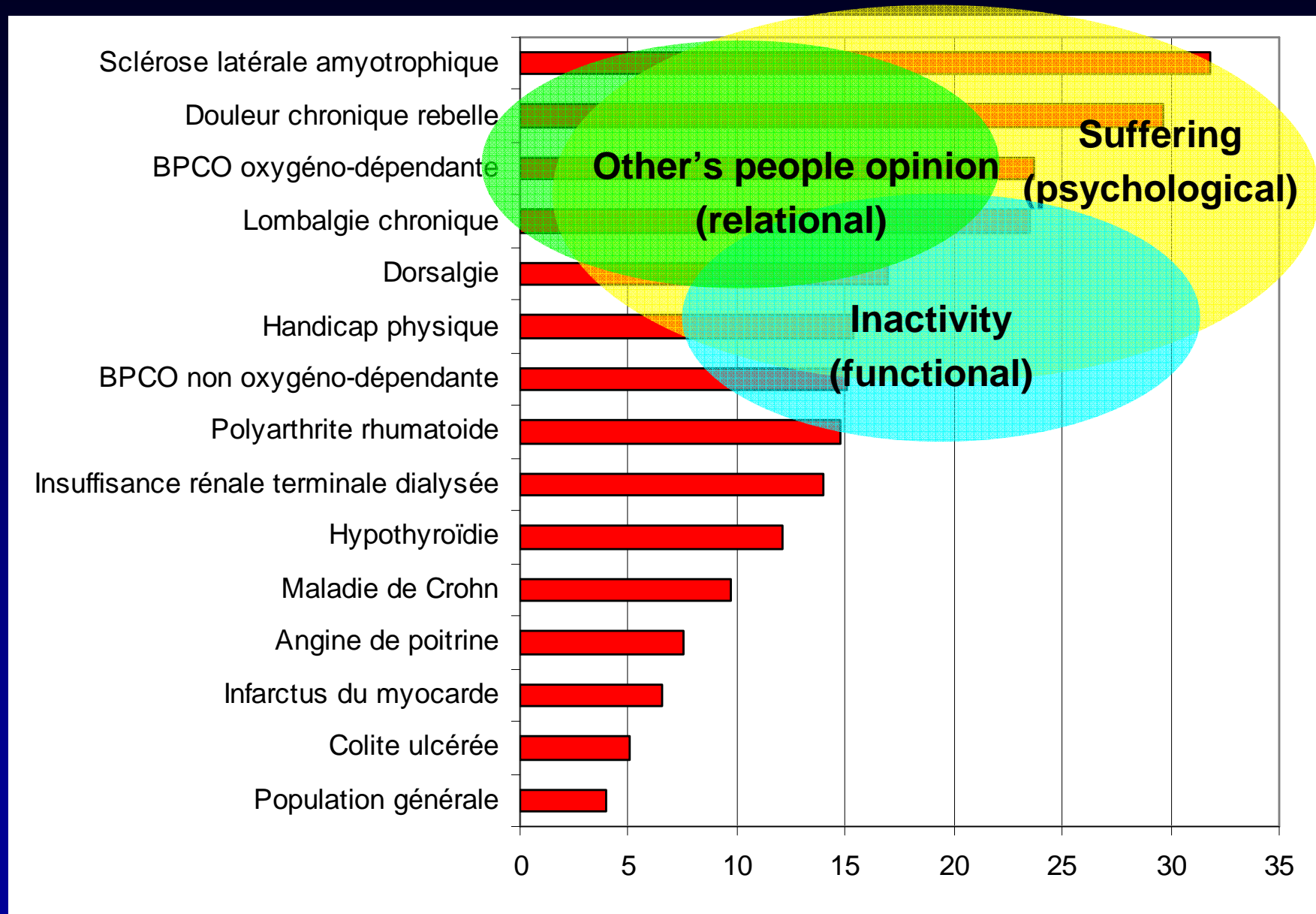
## COPD health-related quality of life



(Curtis *et al.*, 1997, AJRCCM)



« COPD health-related quality of life » (Pubmed, jan 2009)

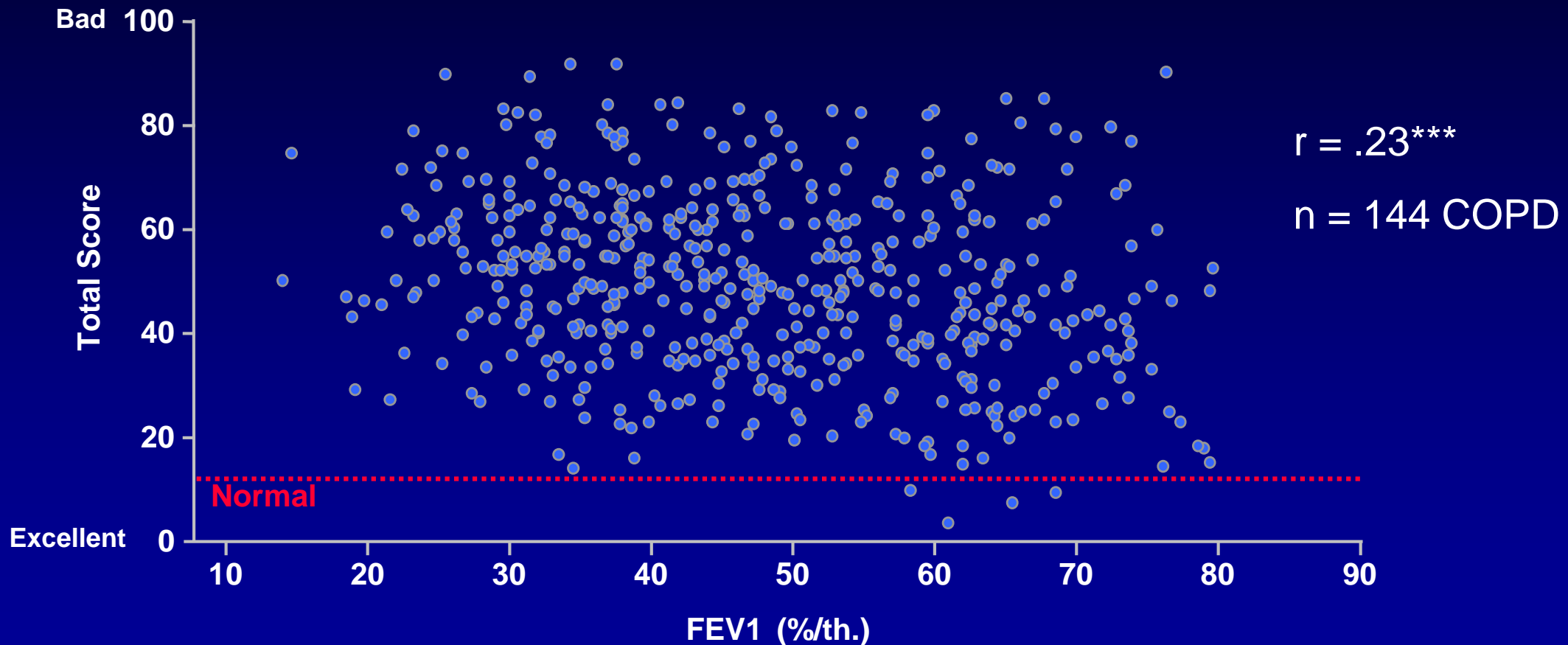


Health status (*Sickness Impact Profile*)

(Bergner et al., 1976, MC)

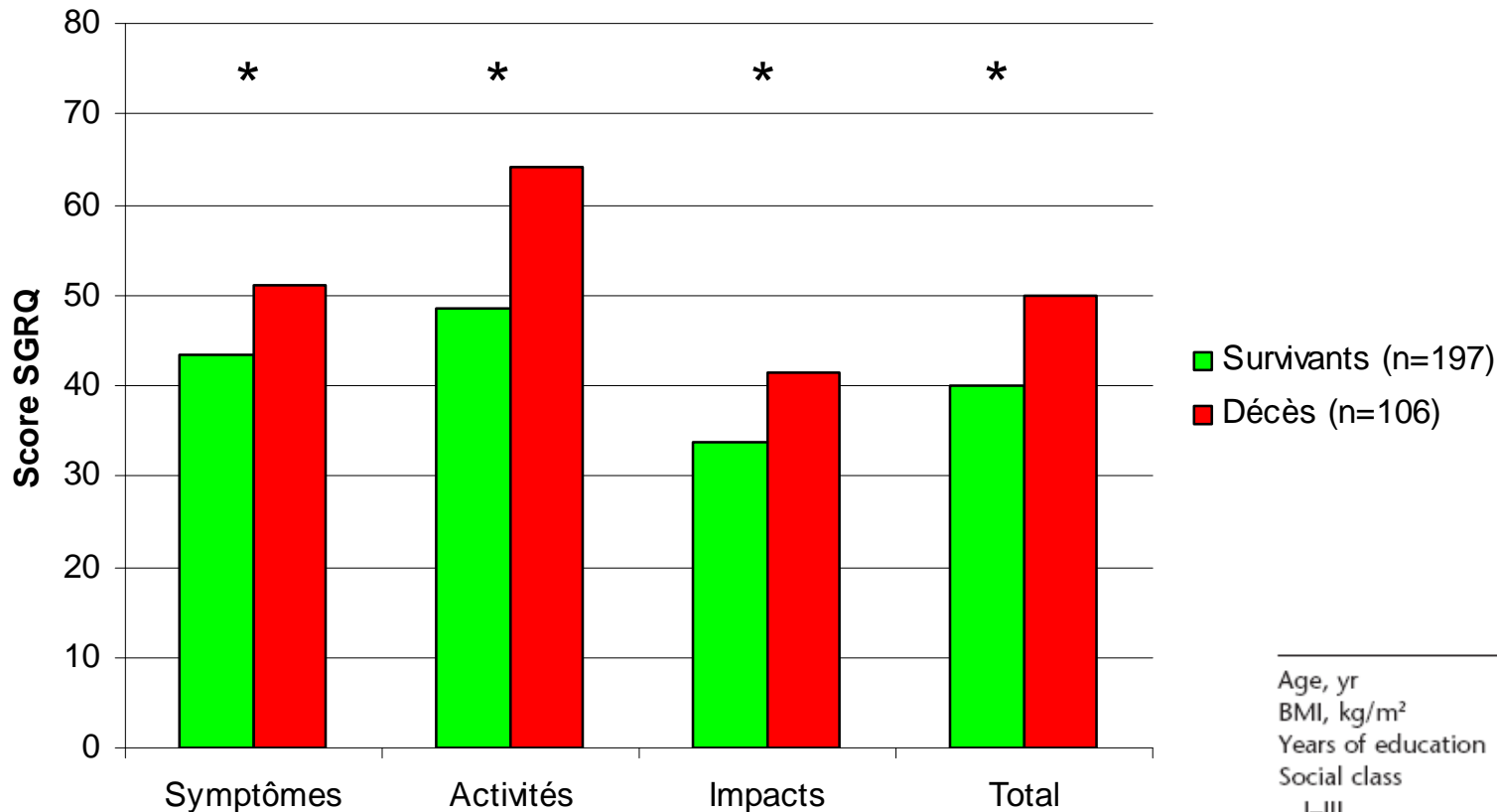
## Correlation between Total score of SGRQ and FEV1 (post-Br.-Dilat.)

(Burge et al., 2000, BMJ, UK)



$r =$  from .14 to .41 (Jones et al., 2001, Thorax)

## Follow-up of 303 COPD patients for 7 years post-measure SGRQ



	Alive (n = 197)	Dead (n = 106)	p Value
Age, yr	62.5 (9.1)*	69.8 (8.8)	< 0.001
BMI, kg/m <sup>2</sup>	27.1 (4.9)	25.4 (4.2)	0.003
Years of education	5.0 [6.0]*	6.0 [7.0]	0.682
Social class			0.774
I-III	39 (19.8%)*	20 (19.2%)	
IVa	123 (62.4%)	62 (59.6%)	
IVb-V	35 (17.8%)	22 (21.2%)	
Number of chronic conditions	2 [2.0]	2 [2.0]	0.656
Current-smoker	75 (43.1%)	23 (25.3%)	0.017
Dyspnea (VAS)	3.1 (2.4)	3.8 (2.7)	0.033
FEV <sub>1</sub> , % over predicted	51.0 [30.5]	34.0 [22.0]	< 0.001
FEV <sub>1</sub> , L	1.5 [1.0]	1.0 [0.7]	0.07
FEV <sub>1</sub> /FVC	0.54 (0.13)	0.45 (0.13)	< 0.001
FEV <sub>1</sub> postbronchodilator, L	1.6 [1.0]	1.0 [0.7]	< 0.001
Pa <sub>O<sub>2</sub></sub> , mm Hg	71.7 (11.3)	66.2 (13.8)	0.002
Pa <sub>CO<sub>2</sub></sub> , mm Hg	41.0 [5.5]	42.8 [9.9]	0.025

(Domingo-Salvany et al., 2002, AJRCCM)

## Follow-up of 449 COPD patients for 5 years post-measure SGRQ

144 deaths / 449 (77,3% Men; 73,2 yr)



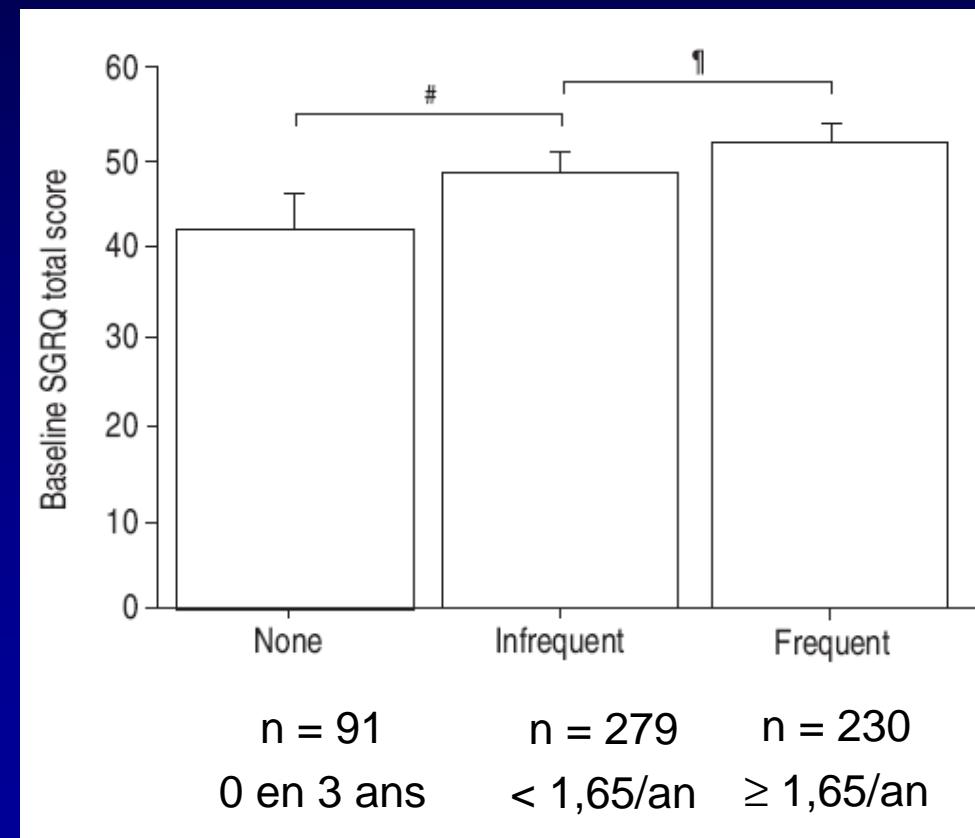
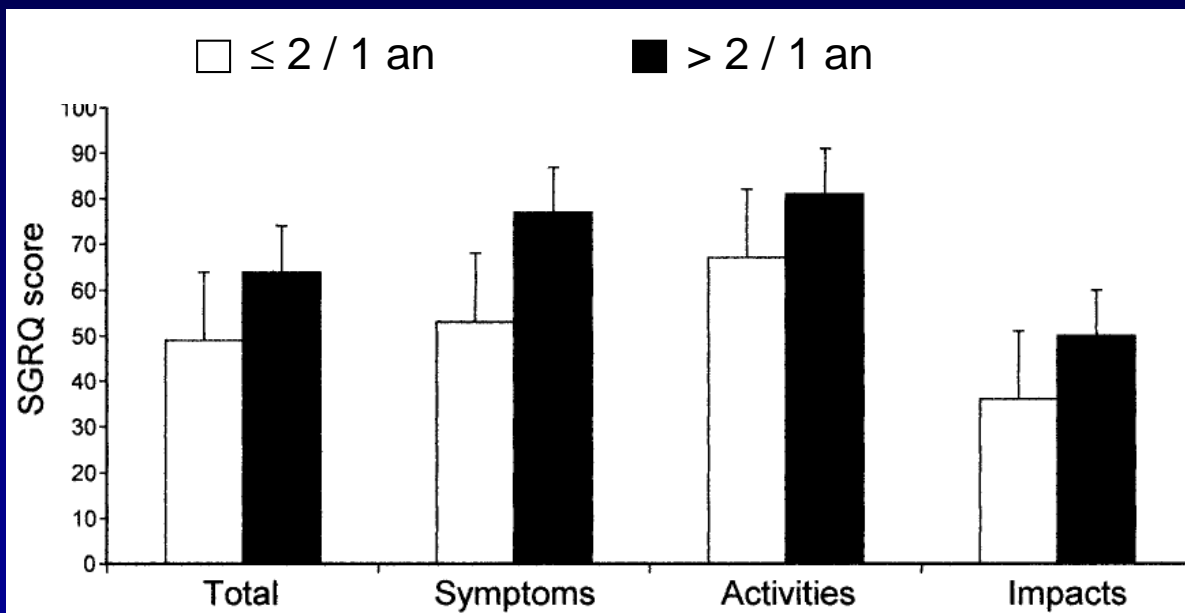
<b>Tertile I</b>	<b>Tertile II</b>	<b>Tertile III</b>
<b>&lt; 2</b>	<b>&lt; 34</b>	<b>≥ 34</b>
n = 149	n = 147	n = 153
0,1 (0,4)	18,3 (9,4)	54,4 (14,0)

(Conte et al., 2008, BMCPM, Italie)

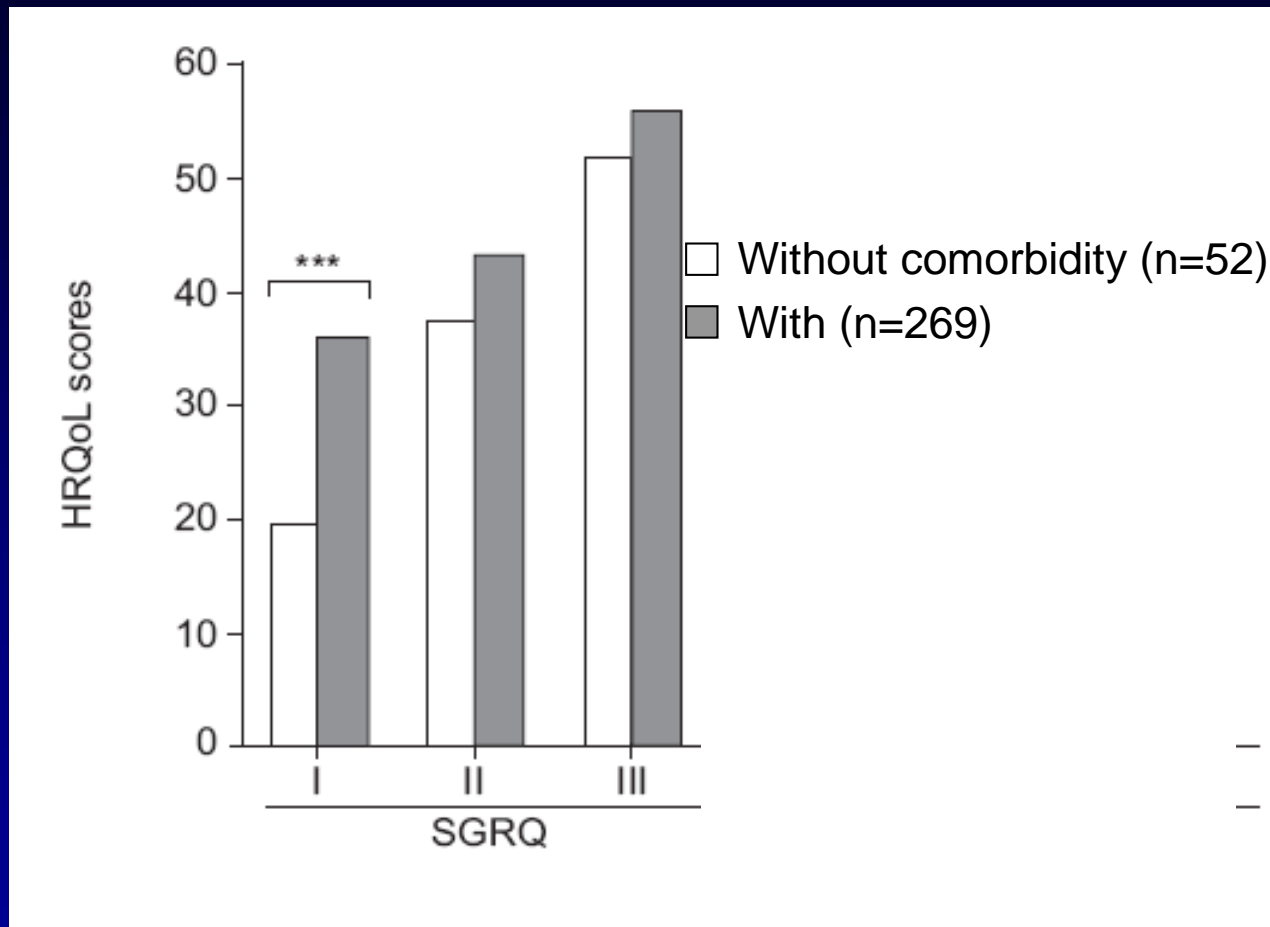
## Total SGRQ : exacerbations predictor ?

(Seemungal et al., 1998, AJRCCM, UK, 1 an)

(Spencer, 2004, ERJ, UK, 3 ans)



### HRQoL : comorbidities indicator (Sin et al., 2006, ERJ)

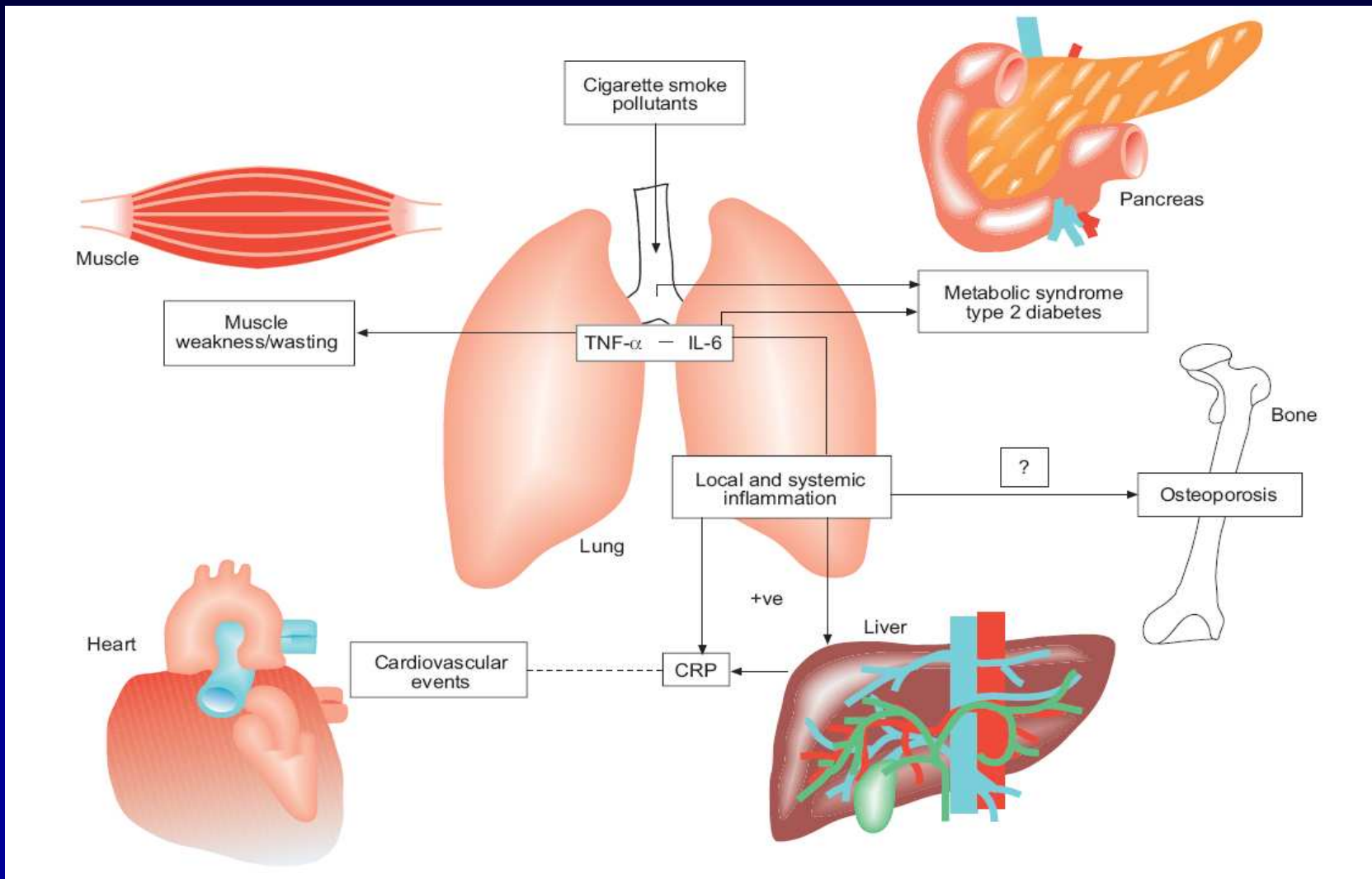


(Ferrer et al., 1997, AIM)

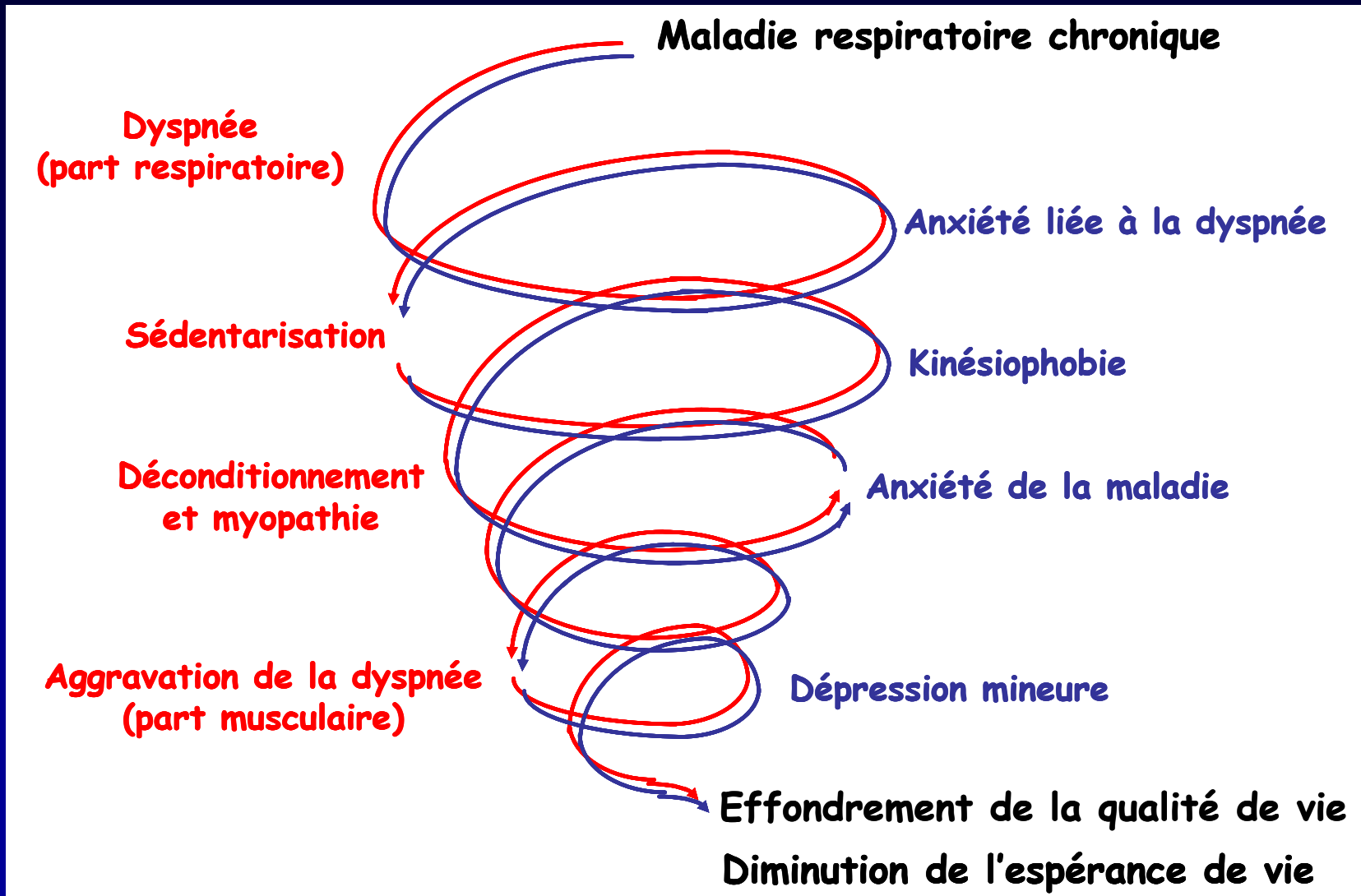
For example : inflammation (high CRP)  $\Rightarrow$  symptoms score +++

(Broekhuizen et al., 2006, Chest)

## COPD : Systemic and complex chronic disease ⇨ HRQoL



## Vicious circle of physical and psychosocial deconditioning



Préfaut et Ninot (2009)

## Properties of a HRQoL questionnaire

### Metrological properties

#### Internal validity

- preliminary version
- content validity
- choice of items
- construct validity

#### External validity

- concomitant validity
- « cut off »
- norms

#### Reproducibility

#### Sensibility (or MCID)

### Formal properties

#### Instructions

#### Clarity

#### Answer modality

#### Understandability

### Clinical properties

#### Target population

#### Test conditions

#### Test duration

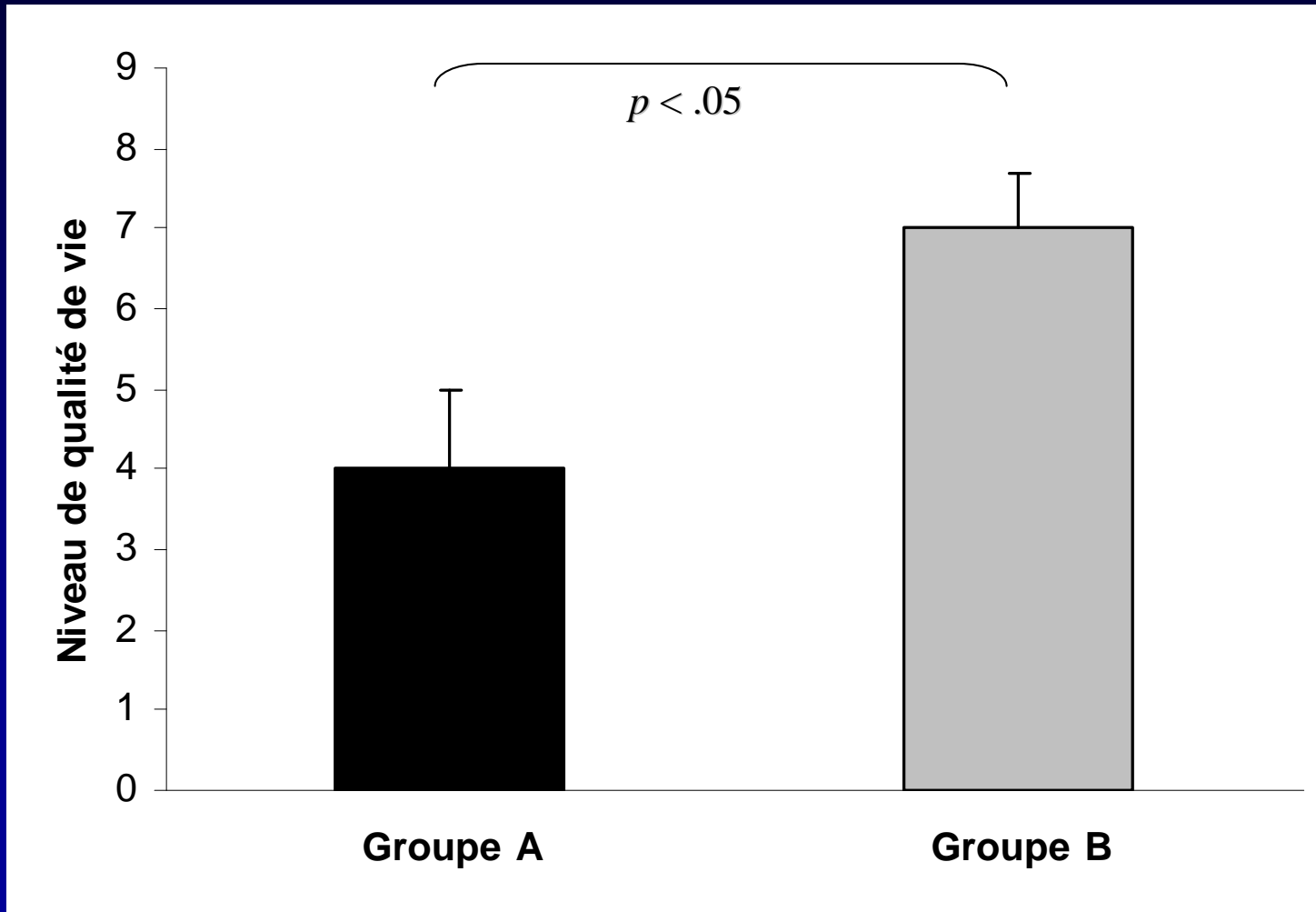
#### Interpretation duration

#### Non inclusion criteria

### Aim

Discriminate, assess or predict ?

## Discriminative function



## COPD specific questionnaires

	<b>Dimensions</b>	<b>Authors</b>	<b>N° items</b>	<b>Duration</b>	<b>English</b>	<b>French</b>
<b>St George's Respiratory Questionnaire SGRQ</b>	3: Impacts, symptoms, activities and Total	Jones et al. (1992, ARRD)	50	20 min	Yes	Bouchet et al. (1996, RMR)
<b>Chronic Respiratory Questionnaire CRDQ</b>	4 : Dyspnea, fatigue, emotional function, control and Total	Guyatt et al. (1987, Thorax)	20	10 min	Yes	Bourbeau et al. (2004, Can Resp)
<b>Maugeri Foundation Respiratory Failure Questionnaire MRF-28</b>	3 : Everyday life, cognitive function, invalidity	Carone et al. (1999, ERJ)	28	12 min	Yes	Janssens et al. (2004, Respiration)
<b>COPD Clinical Questionnaire CCQ</b>	Symptoms, functional, mind state and Total	Rodriguez-Roisin (2000, Chest)	10	5 min	Yes	No
<b>Severe Respiratory Insufficiency SRI</b>	7 : respiratory complaints, physical functioning, attendant symptoms and sleep, social relationship, anxiety, psychological wellbeing, social functioning and Total	Windisch et al. (2003, 2008, JCE)	49	20 min	Yes	No
<b>Breathing Problems Questionnaire BPQ</b>	2 : Breathing problems, emotional assessment and Total	Hyland et al. (1994, QLR)	33	15 min	Yes	No
<b>Airways Questionnaire AQ20</b>	2 : Fonctional, psychological and Total	Hajiro et al. (1999, AJRCCM)	20	20 min	Yes	No

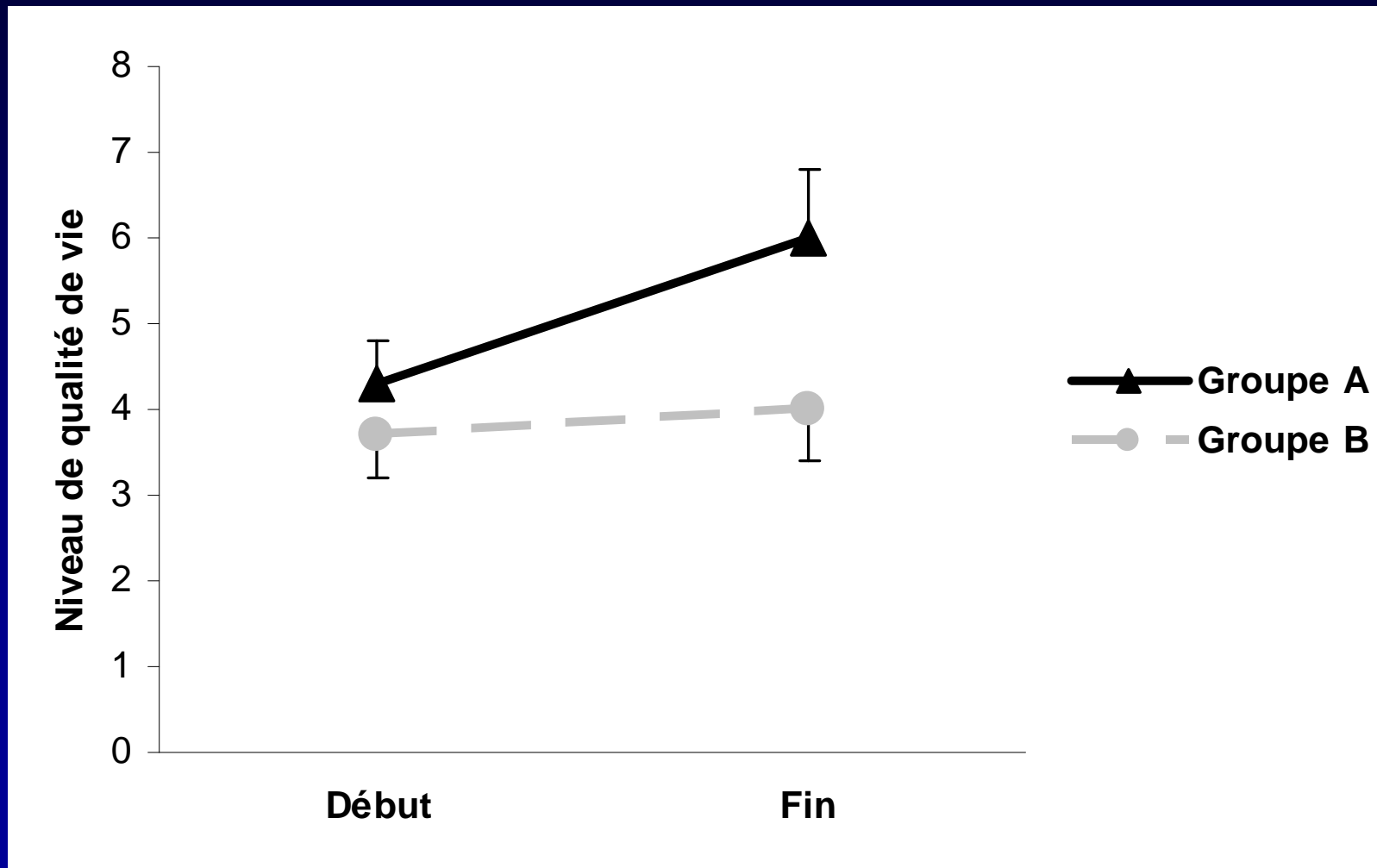
# Generic HRQoL questionnaires used

	<b>Dimensions</b>	<b>Authors</b>	<b>N° items</b>	<b>Duration</b>	<b>English</b>	<b>French</b>
<b>Sickness Impact Profile SIP</b>	12 : Emotional behavior, psychical limitations, communication, sleep – rest, alimentation, walking, mobility, daily activities, social interactions, work, confinement, leisure	Bergner et al. (1981)	135	60 min	Yes	Yes
<b>MOS-Short Form 36 SF-36</b>	8 : physical functioning; role limitations because of physical health problems; bodily pain; social functioning; general mental health; role limitations because of emotional problems; vitality ; and general health perceptions	Ware et Sherbourne, (1992)	36	20 min	Yes	Boueri et al. (2001)
<b>Echelle de QV de l'OMS WHO-QOL</b>	6 : Quality of life, health perception, biological, psychological, social, environment	WHO-QOL group (1998, PM)	26	15 min	Yes	Lepège et al. (2000, Encephale)
<b>Nottingham Health Profile NHP</b>	6 : Mobility, pain, sleep, energy, social isolation, emotional reactions	Hunt et al. (1980, JECH)	38	15 min	Yes	Yes
<b>European Quality of Life Euro QoL 5D</b>	5 : Mobility, self-care, usual activities, pain/discomfort and anxiety/depression	EuroQoL Group (1990)	16	10 min	Yes	Yes
<b>Profil de Qualité de Vie Subjective PQVS</b>	7 : Health, sleep, reflexion, sexuality, social relations, future, inner life	Gerin et al. (1991)	36	25 min	No	Yes

## All generic questionnaires about quality of life

General health status questionnaire	Smithkline Beecham QoL Scale
Health Measurement Questionnaire	Goteborg QoL Instrument
Lancashire QoL Profile	Life-as-a-whole Index
Lehmans QoL Interview	Multifaceted Lifestyle Satisfaction Scale
Life Experiences Checklist	QoL Index
Life Satisfaction Index	QoL Questionnaire (Shalock)
Medical Outcomes Study (MOS) SF-36	Inventaire systématique de la qualité de vie
Nottingham Health Profile (NHP)	Quality of Well Being Scale
QoL Enjoy and Satisfact Questionnaire	Schedule for the Eval of Individ QoL
QoL Index for Mental Health	QoL Self Assessment Inventory
QoL Interview Schedule	Satisfaction with Life Scale
QoL Inventory	Sickness Impact Profile
QoL Questionnaire (Bigelow)	WHO-QoL 100
Euro QoL 6D	WHO-QoL 26

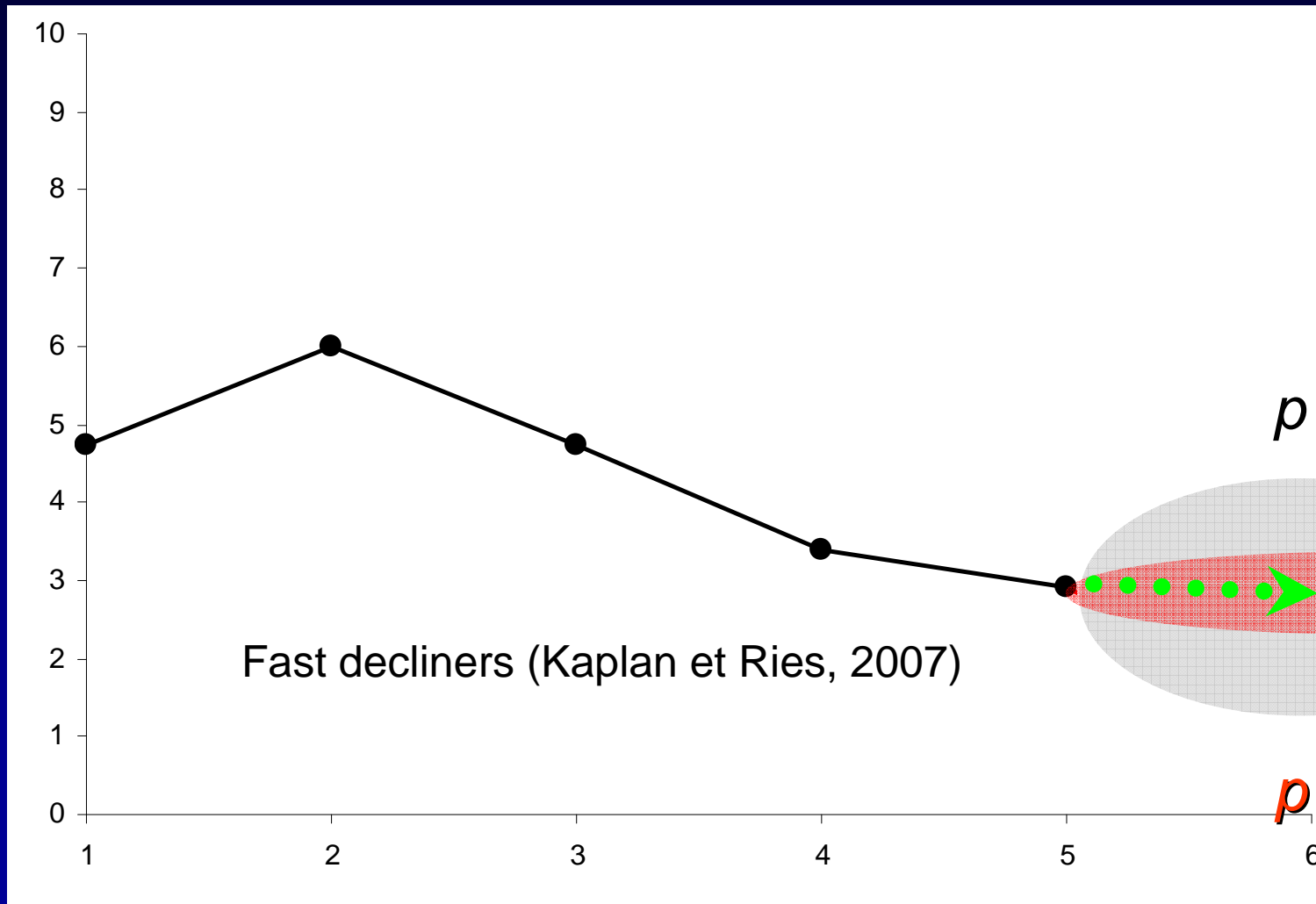
## Evaluative function



# COPD specific questionnaires

	<b>Dimensions</b>	<b>Authors</b>	<b>N° items</b>	<b>Duration</b>	<b>English</b>	<b>French</b>
<b><i>St George's Respiratory Questionnaire</i></b> <b>SGRQ</b>	3: Impacts, symptoms, activities and Total	Jones et al. (1992, ARRD)	50	20 min	Yes	Bouchet et al. (1996, RMR)
<b><i>Chronic Respiratory Questionnaire</i></b> <b>CRDQ</b>	4 : Dyspnea, fatigue, emotional function, control and Total	Guyatt et al. (1987, Thorax)	20	10 min	Yes	Bourbeau et al. (2004, Can Resp)
<b><i>Maugeri Foundation Respiratory Failure Questionnaire</i></b> <b>MRF-28</b>	3 : Everyday life, cognitive function, invalidity	Carone et al. (1999, ERJ)	28	12 min	Yes	Janssens et al. (2004, Respiration)

# Explicative function or even predictive



	<b>Dimensions</b>	<b>Authors</b>	<b>N° items</b>	<b>Duration</b>	<b>English</b>	<b>French</b>
<b>Short Form Chronic Respiratory Disease Questionnaire SF-CRDQ</b>	Dyspnea, Fatigue, Emotional function and Mastery	Tsai et al. (2008, JCE)	8	5 min	Yes	No
<b>COPD Assessment Test CAT</b>	Total (COPD impact)	Jones et al. (2009, ERJ)	8	4 min	Yes	No (traduction)
<b>Visual Simplified Respiratory Questionnaire VSRQ</b>	Total	Perez et al. (2009, JCOPD)	8	4 min	No	Perez et al. (2009, JCOPD)
<b>Questionnaire court de QVLS-BPCO VQ11</b>	Total, Fonctional, Psychological, Relational	Ninot et al. (2010, RMR)	11	5 min	No	Ninot et al. (2010, RMR)

# Short Form Chronic Respiratory Disease Questionnaire

## SF-CRDQ

### Items and scoring of the Short-Form Chronic Respiratory Disease Questionnaire (SF-CRDQ)

#### Dyspnea domain

	Very short of breath	Quite a bit of breath	Moderate Shortness of breath	Some Shortness of breath	A little Shortness of breath	Not at all short of breath
1	2	3	4	5	6	7

1. Please indicate how much shortness of breath you have had during the last \_\_\_ while walking on a flat surface?
2. Please indicate how much shortness of breath you have had during the last \_\_\_ while sleeping?

(Tsai *et al.*, 2008, JCE)

1. Please indicate how much shortness of breath you have had during the last \_\_\_ while walking on a flat surface?
2. Please indicate how much shortness of breath you have had during the last \_\_\_ while sleeping?

#### Fatigue domain

All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	Hardly any of the time	None of the time
1	2	3	4	5	6	7

No energy at all	A little energy	Some energy	Moderate energy	Quite a bit of energy	Very energetic	Full of energy
1	2	3	4	5	6	7

3. How often over the last \_\_\_\_\_ have you felt worn out or sluggish?

4. How much energy have you had in the last \_\_\_\_\_?

#### Emotional function domain

All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	Hardly any of the time	None of the time
1	2	3	4	5	6	7

5. In general, how much of the time during the last \_\_\_\_\_ have you felt frustrated or impatient?
6. In general, how much of the time did you feel upset, worried, or depressed during the last \_\_\_\_\_?

#### Mastery domain

All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	Hardly any of the time	None of the time
1	2	3	4	5	6	7

7. How often during the last \_\_\_\_\_ did you have a feeling of fear or panic when you had difficulty getting your breath?

None of the time	Hardly any of the time	A little of the time	Some of the time	A good bit of the time	Most of the time	All of the time
1	2	3	4	5	6	7

8. How often during the last \_\_\_ did you feel you had complete control over your breathing problems?

# Thematic coverage of items

## SF-CRDQ

Walk dyspnea

Fatigue + energy

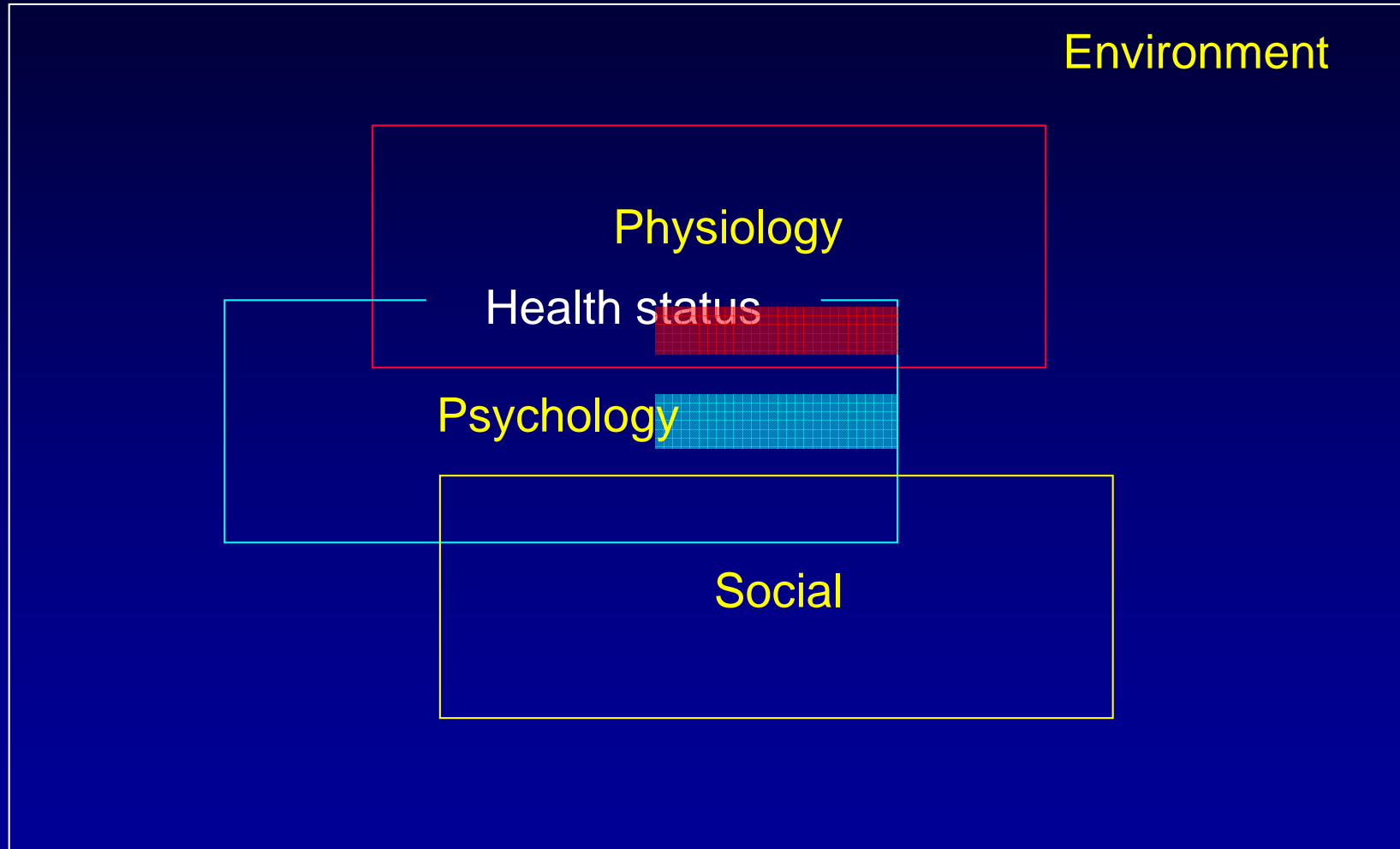
Control

Anxiety + Control

Depression (emotion)

Sleep (dyspnea)

## SF-CRDQ



# COPD Assessment Test (CAT)

Quel est l'état de votre BPCO? Répondez au questionnaire CAT (COPD Assessment Test™) pour évaluer votre BPCO.



(Jones *et al.*, 2009, ERJ)

Exemple: Je suis très heureux (heureuse) 0 ~~1~~ 2 3 4 5 Je suis très triste

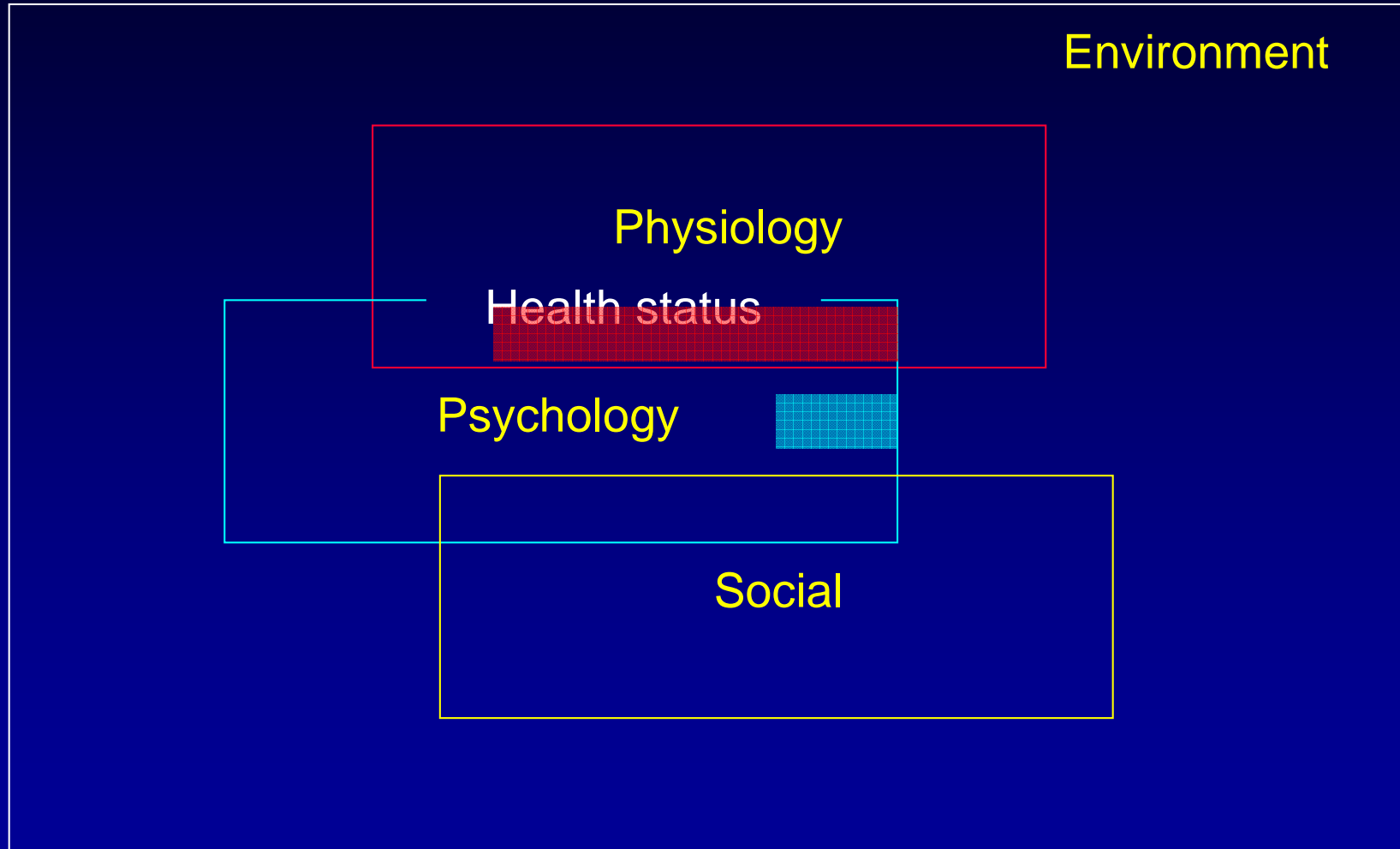
		SCORE					
Je ne tousse jamais	0 1 2 3 4 5	Je tousse tout le temps					
Je n'ai pas du tout de glaire (mucus) dans les poumons	0 1 2 3 4 5	J'ai les poumons entièrement encombrés de glaire (mucus)					
Je n'ai pas du tout la poitrine oppressée	0 1 2 3 4 5	J'ai la poitrine très oppressée					
Quand je monte une côte ou une volée de marches, je ne suis pas essouffé(e)	0 1 2 3 4 5	Quand je monte une côte ou une volée de marches, je suis très essouffé(e)					
Je ne suis pas limité(e) dans mes activités chez moi	0 1 2 3 4 5	Je suis très limité(e) dans mes activités chez moi					
Je ne suis pas inquiet(e) quand je quitte la maison, en dépit de mes problèmes pulmonaires	0 1 2 3 4 5	Je suis très inquiet(e) quand je quitte la maison, en raison de mes problèmes pulmonaires					
Je dors bien	0 1 2 3 4 5	Je dors mal à cause de mes problèmes pulmonaires					
Je suis plein(e) d'énergie	0 1 2 3 4 5	Je n'ai pas d'énergie du tout					
			<b>SCORE TOTAL</b>				

Le logo CAT et COPD Assessment Test est une marque déposée du groupe GlaxoSmithKline. © 2009 GlaxoSmithKline. Tous droits réservés.

# Thematic coverage of items

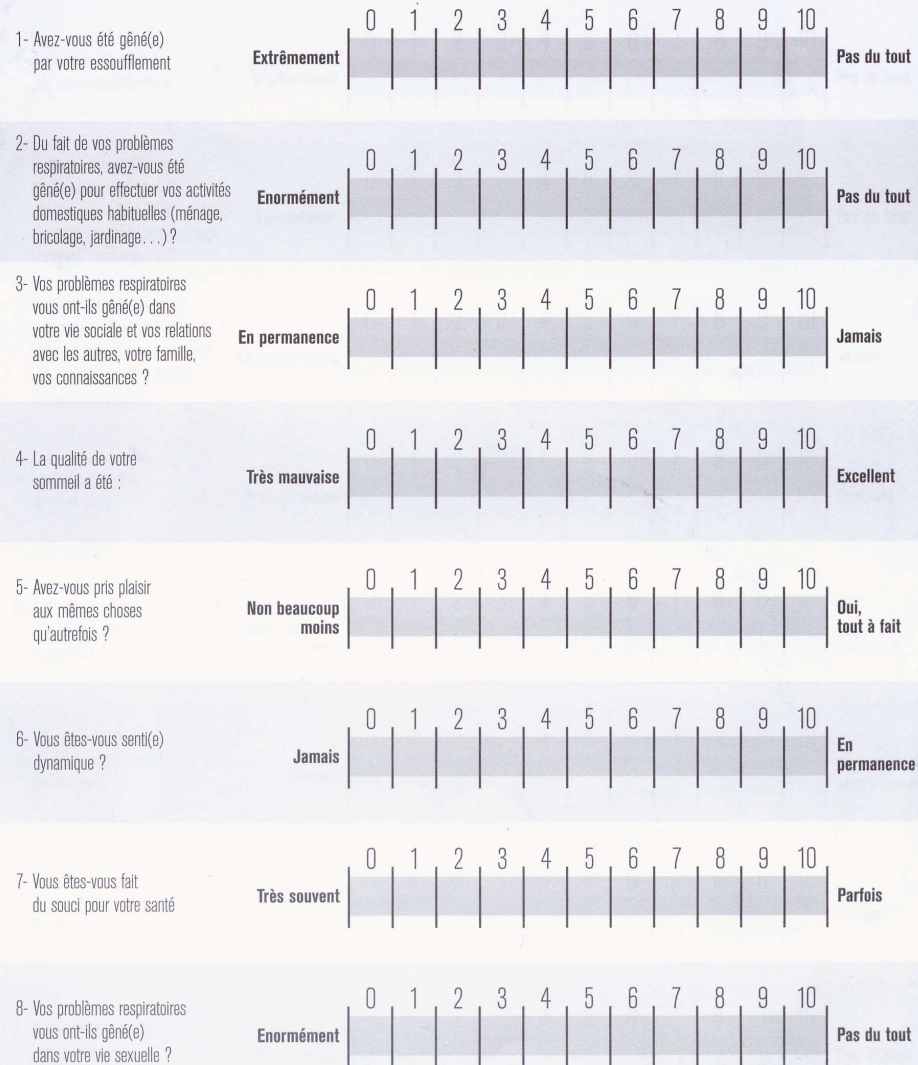
	SF-CRDQ	CAT
Red	Walk dyspnea	Breathlessness
	Fatigue + energy	Energy
	Control	Activities
		Phlegm (mucus)
		Cough (toux)
		Chest tightness (raideur)
Cyan		Confidence
	Anxiety + Control	
	Depression (emotion)	
	Sleep (dyspnea)	Sleep
Yellow		

## COPD Assessment Test (CAT)



# VSRQ

## Le questionnaire visuel analogique de qualité de vie



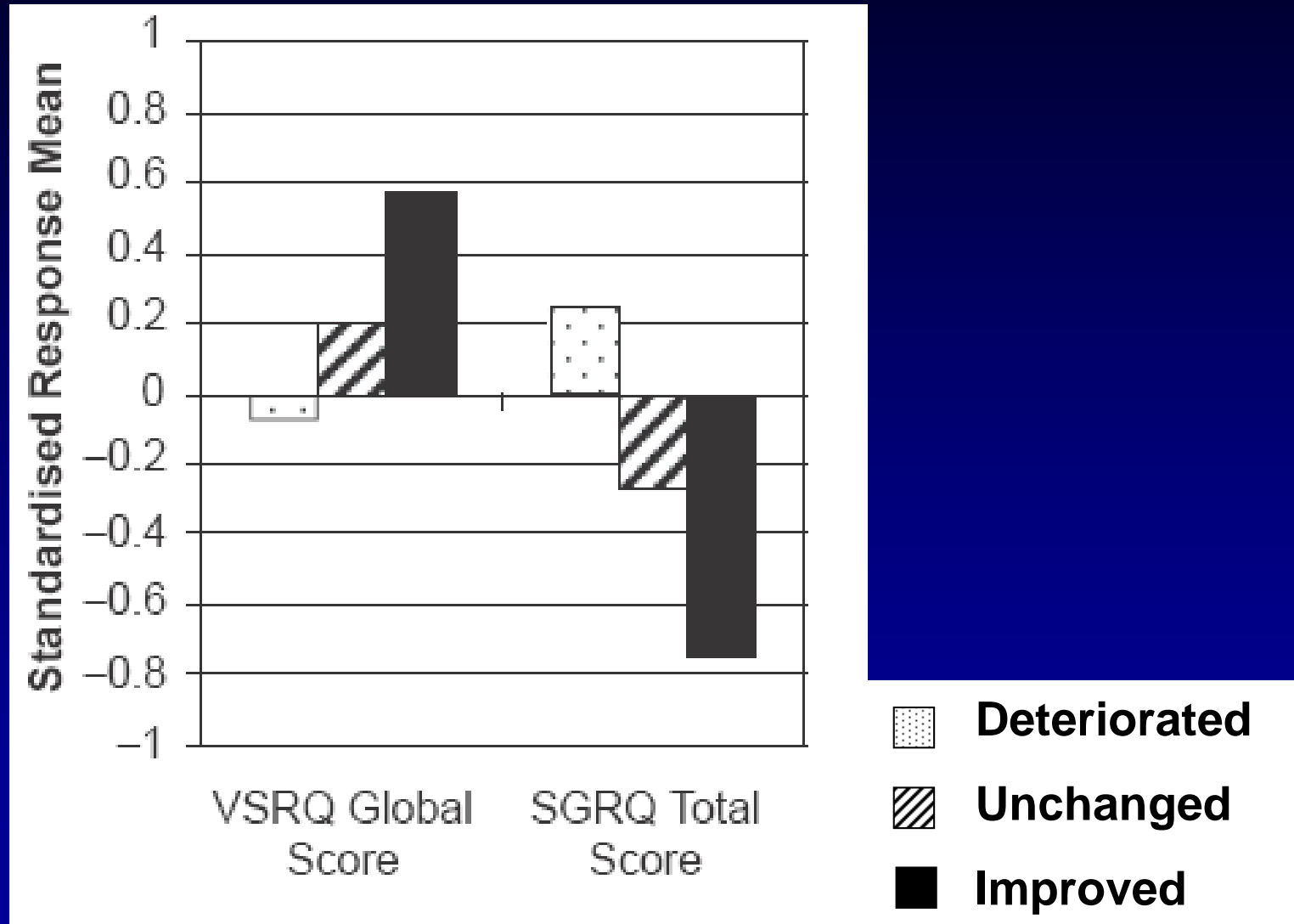
\* Visual Simplified Respiratory Questionnaire<sup>(1)</sup>

(1) Perez T *et al.* Validity, reliability, and responsiveness of a new short Visual Simplified Respiratory Questionnaire (VSRQ) for health-related quality of life assessment in chronic obstructive pulmonary disease. *Int J of COPD* 2009; 4 : 9-18

VSRQ® BOEHRINGER INGELHEIM FRANCE, [année de développement du Questionnaire ou de la Traduction Disponible dont l'utilisation est sollicitée], All rights reserved / Tous droits réservés

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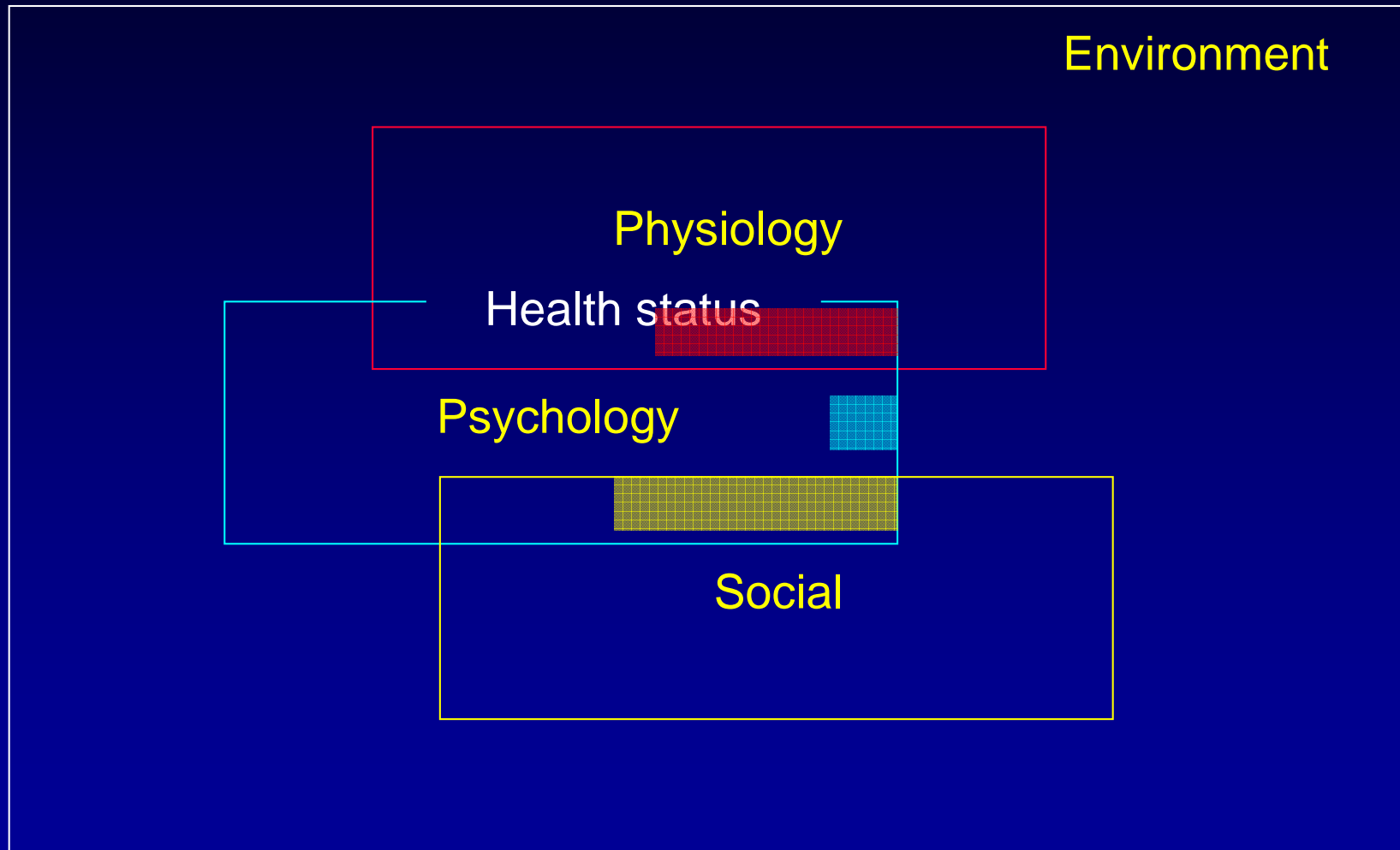
# VSRQ



## Thematic coverage of items

	SF-CRDQ	CAT	VSRQ
Red	Walk dyspnea	Breathlessness	Shortness of breath
	Fatigue + energy	Energy	Energy
	Control	Activities	Daily activities
		Phlegm (mucus)	
		Cough (toux)	
		Chest tightness (raideur)	
Cyan		Confidence	
	Anxiety + Control		Worry
	Depression (emotion)		
	Sleep (dyspnea)	Sleep	Sleep
Yellow			Sexual life
			Pleasure
			Social life

## Visual Simplified Respiratory Questionnaire (VSRQ)



VQ11

# Questionnaire de qualité de vie BPCO

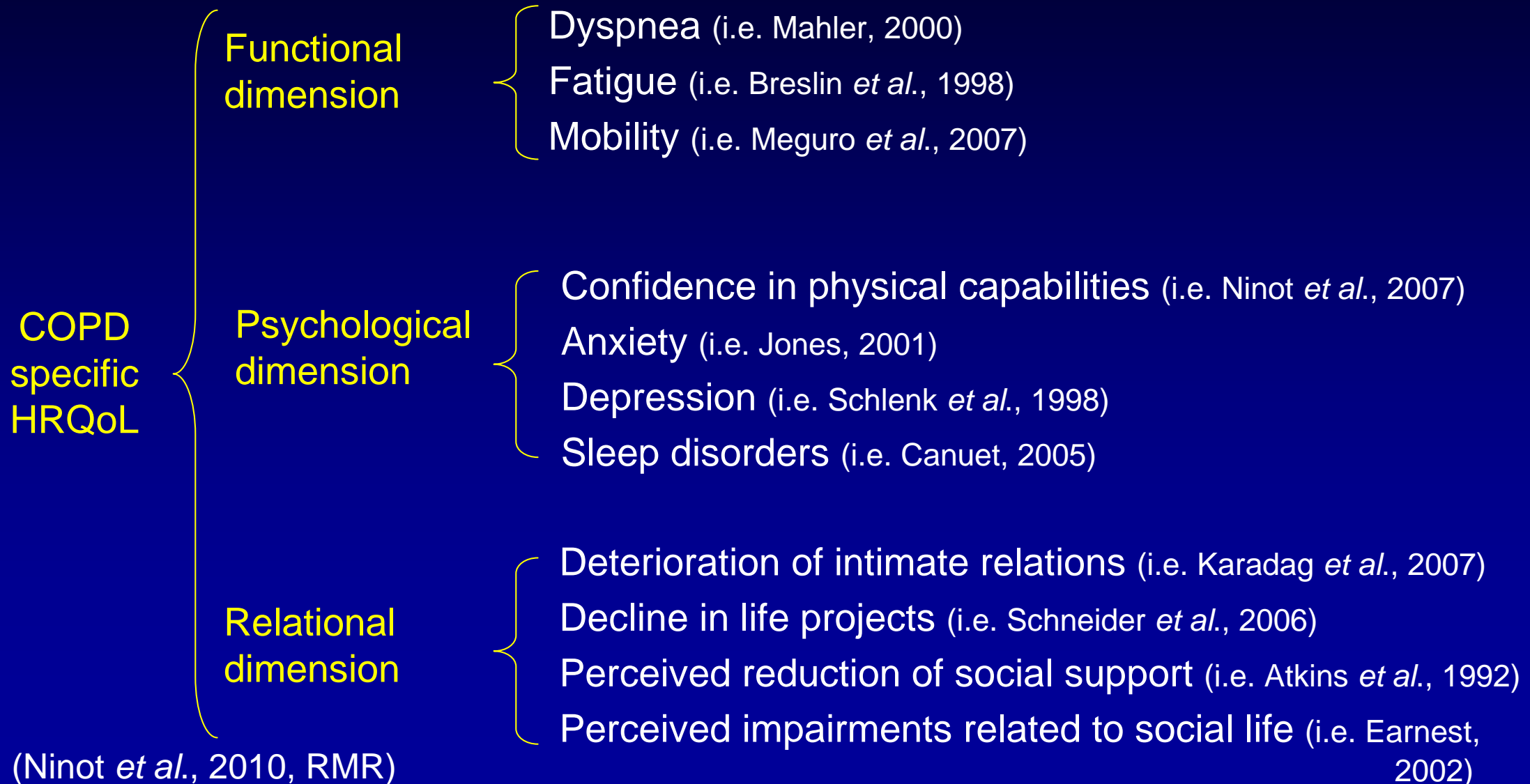
Nom \_\_\_\_\_ Prénom \_\_\_\_\_

Date \_\_\_\_ / \_\_\_\_ / 20\_\_\_\_

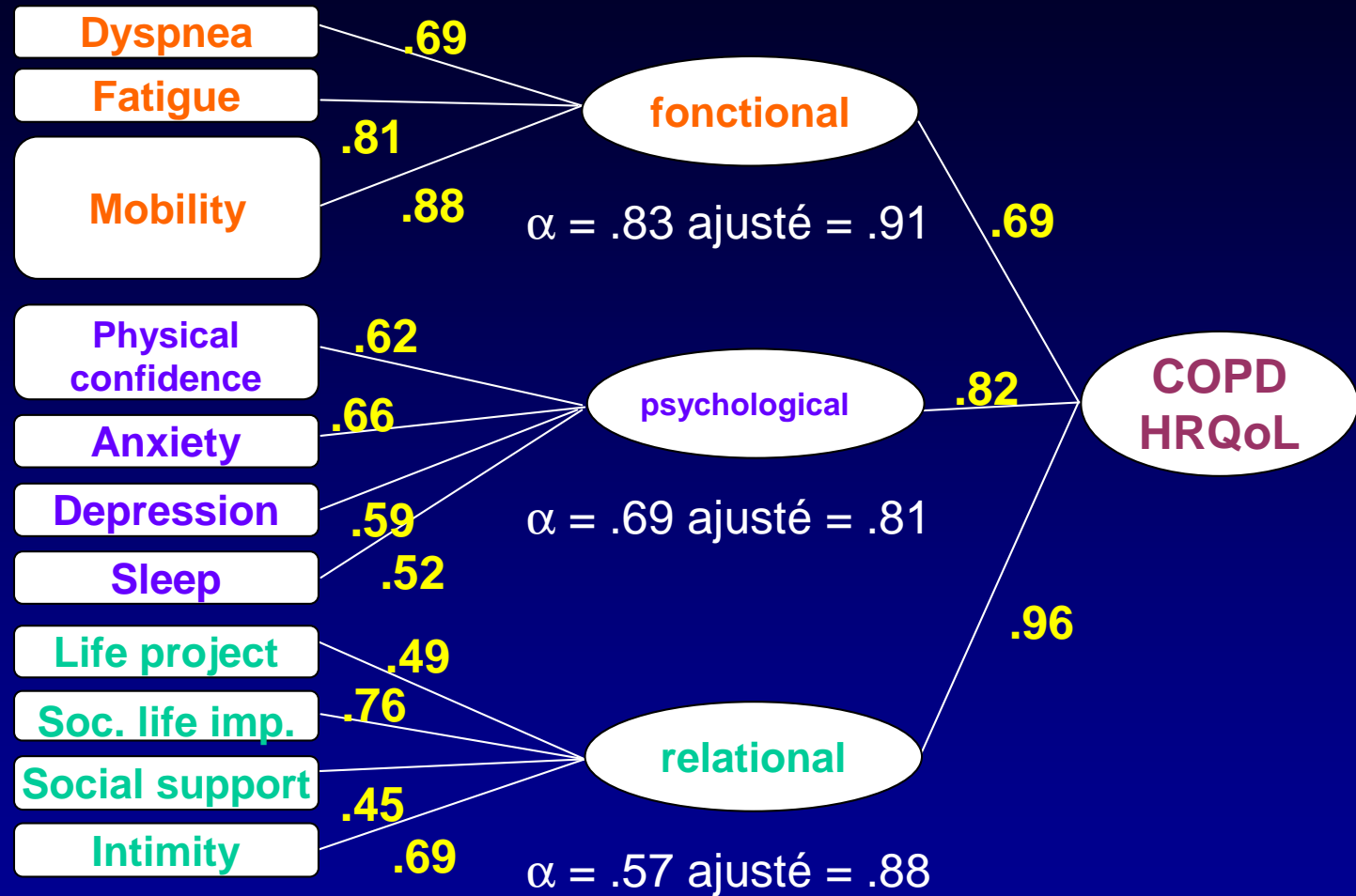
Les phrases suivantes expriment des sentiments sur les conséquences d'une maladie respiratoire. Pour chacune, cochez l'intensité qui vous correspond le mieux maintenant. Aucune réponse n'est juste, elle est avant tout personnelle.

		Pas du tout	Un peu	Moyennement	Beaucoup	Extrêmement
1	Je souffre de mon essoufflement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Je me fais du souci pour mon état respiratoire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Je me sens incompris par mon entourage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Mon état respiratoire m'empêche de me déplacer comme je le voudrais	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Je suis somnolent dans la journée	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Je me sens incapable de réaliser mes projets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Je me fatigue rapidement dans les activités de la vie quotidienne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Physiquement, je suis insatisfait de ce que je peux faire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Ma maladie respiratoire perturbe ma vie sociale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Je me sens triste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Mon état respiratoire limite ma vie affective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Theoretical model of VQ11



# Results



$\chi^2 = 62,042$ ; dl 41; Ratio  $\chi^2$ /dl = 1,51;  $p < 0,02$ ; CFI = 0,955;

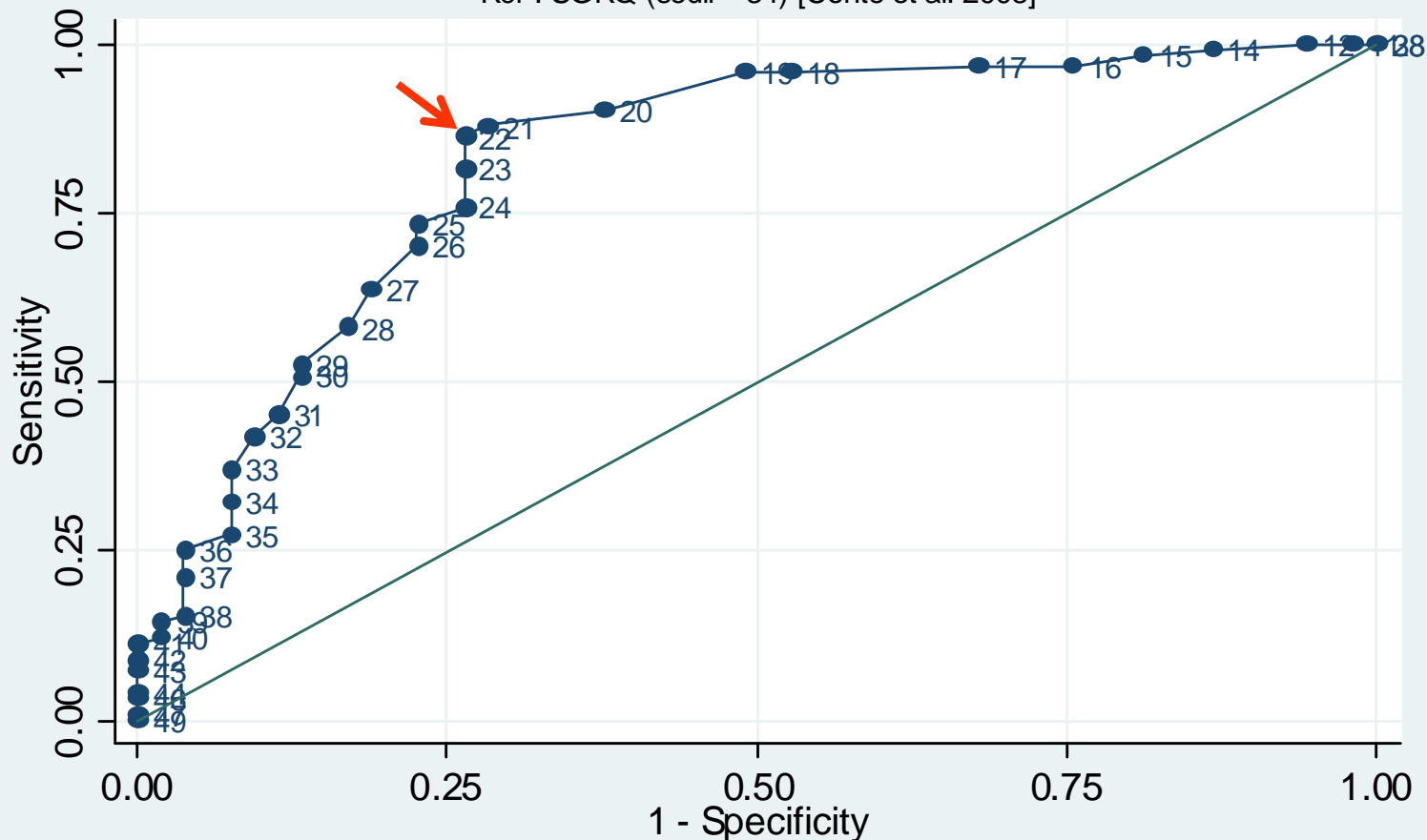
TLI = 0,939; RMSEA = 0,056; RMSEA IC 90% = 0,023-0,082;

SRMR = 0,054

# Discriminant function

## VQ11 : Détermination d'un seuil (Courbe ROC)

Réf : SGRQ (seuil = 34) [Conte et al. 2008]



**Cut-off = 22**

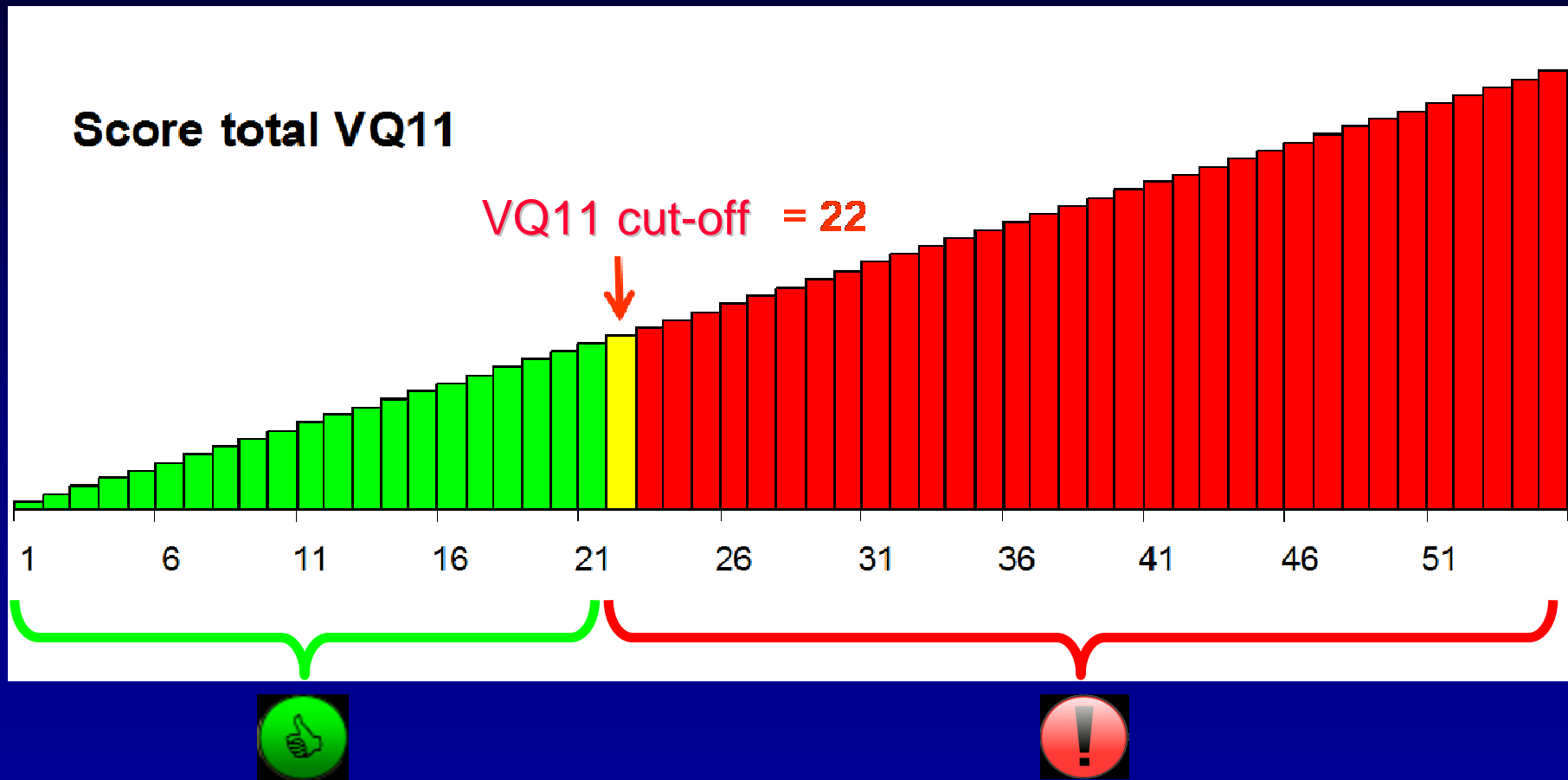
→ 83% well classified subjects

→ Se = 87,9%

→ Sp = 71,7%

(Conte et al., 2008) : SGRQ score  $\geq 34$  is associated with significant higher mortality prognosis

# COPD specific health-related quality of life

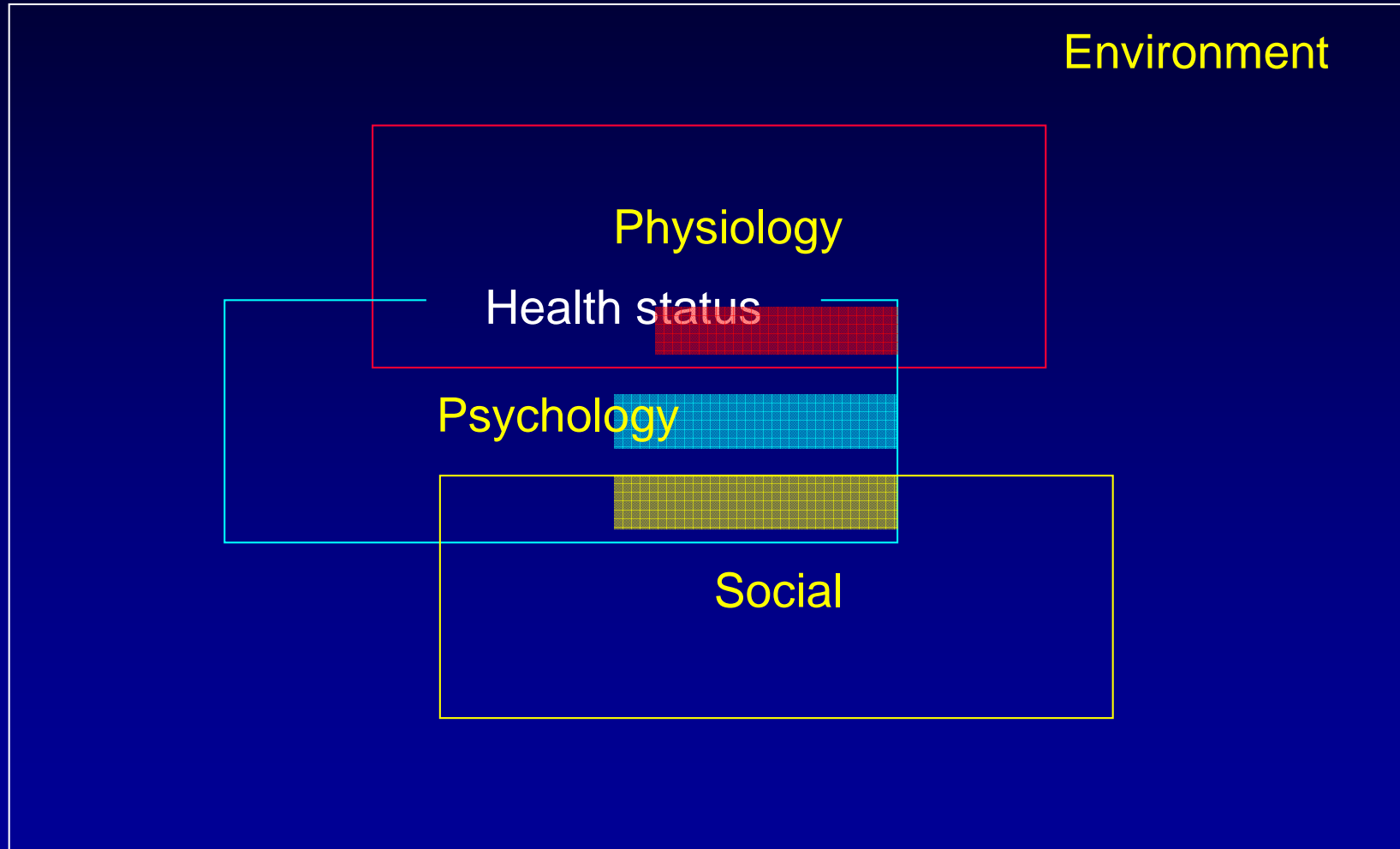


Determination based on SGRQ cut-off = 34 (ROC curves)

# Thematic coverage of items

	SF-CRDQ	CAT	VSRQ	VQ11
Red	Walk dyspnea	Breathlessness	Shortness of breath	Dyspnea
	Fatigue + energy	Energy	Energy	Fatigue
	Control	Activities	Daily activities	Mobility/everyday life
		Phlegm (mucus)		
		Cough (toux)		
		Chest tightness (raideur)		
Cyan		Confidence		Confidence in physical capabilities
	Anxiety + Control		Worry	Anxiety
	Depression (emotion)			Depression
	Sleep (dyspnea)	Sleep	Sleep	Sleep disorders
Yellow			Sexual life	Deterioration of intimate relations
			Pleasure	Decline in life projects
				Perceived reduction of social support
			Social life	Perceived impairments related to social life

VQ11



## Synthesis of available and frequently used French tools

	<b>SGRQ</b>	<b>VSRQ</b>	<b>VQ11</b>
<b>Aim</b>	Discriminative (cohorts – trials)	Evaluative (clinical routine)	Evaluative (clinical routine)
<b>Score</b>	Total Impact Symptoms Activity	Total (HRQoL)	Total (HRQoL) Fonctional Psychological Relational
<b>Structure</b>	20 min / 50 items	4 min / 8 items	5 min / 11 items
<b>Model</b>	Multidimensional 4 scores	Unidimensional 1 score	Multidimensional 4 scores
<b>Measures</b>	Fonctional, psychological	Fonctional, psychological, relational	Fonctional, psychological, relational
<b>Frequency</b>	Yearly	Twice-yearly	Twice-yearly

	<b>SF-CRDQ</b>	<b>CAT</b>	<b>VSRQ</b>	<b>VQ11</b>
<b>Aim</b>	Evaluative (clinical routine)	Evaluative (clinical routine)	Evaluative (clinical routine)	Evaluative (clinical routine)
<b>Score</b>	Dyspnea Fatigue Emotion Mastery	Total (COPD impact)	Total (HRQoL)	Total (HRQoL) Fonctional Psychological Relational
<b>Structure</b>	4 min / 8 items	4 min / 8 items	4 min / 8 items	5 min / 11 items
<b>Model</b>	Multidimensional 4 scores	Unidimensional 1 score	Unidimensional 1 score	Multidimensional 4 scores
<b>Measures</b>	Fonctional, psychological	Fonctional, psychological	Fonctional, psychological, relational	Fonctional, psychological, relational
<b>French</b>	No	Yes (translation)	Yes	Yes

	<b>SF-CRDQ</b>	<b>CAT</b>	<b>VSRQ</b>	<b>VQ11</b>
Measure	COPD 4 domains	COPD impact	Total HRQoL	Total HRQoL + 3 scores
Response	7 points	6 points	11 points	5 points
Min - max	1 – 14 / domain	0 - 40	0 - 80	11 - 55
Method	ACP	Rasch	ACP	Structural equations
Item reduction	From 20 to 8 items Auteurs + Guyatt	From 21 to 8 items Expert committee	From 18 to 8 items Expert committee	From 24 to 11 items Confirmative factor analysis
$\alpha$ Chronbach	.82	.88	.84	.83
Test-retest	Not tested	.80	.77	.72

	<b>SF-CRDQ</b>	<b>CAT</b>	<b>VSRQ</b>	<b>VQ11</b>
Total SGRQ	NC	.80	-.70	.70
VEMS	-.07 à -.28 (Mastery)	NC	.16	-.20
TDM6	NC	NC	NC	-.32
BODE	NC	NC	NC	.46
MCID	1.01	In progress	3,4	In progress
Cut off	NC	NC	NC	22

NC = not communicated

## VQ11 correlations (n=181 COPD)

	Functional	Psychological	Relational	Total
Age	0.10	-0.11	-0.08	-0.04
BMI	0.13	0.05	0.05	0.08
MMRC Dyspnea Grade	<b>0.61</b>	<b>0.49</b>	<b>0.51</b>	<b>0.59</b>
Pack-years (ex-smokers)	<b>0.29</b>	0.19	<b>0.20</b>	<b>0.25</b>
Pack-years (smokers)	0.01	0.10	0.06	0.06
Pre-BD FEV1	<b>-0.28</b>	-0.14	<b>-0.16</b>	<b>-0.21</b>
FEV1 % pred	<b>-0.26</b>	-0.14	-0.13	<b>-0.19</b>
FEV1/FVC	<b>-0.26</b>	<b>-0.17</b>	<b>-0.16</b>	<b>-0.22</b>
Dyspnea 6MWD start	<b>0.17</b>	0.04	0.10	0.11
Dyspnea 6MWD end	<b>0.28</b>	<b>0.20</b>	<b>0.24</b>	<b>0.26</b>
Dyspnea 6MWD difference	<b>0.17</b>	<b>0.19</b>	<b>0.16</b>	<b>0.19</b>
6MWT distance (m)	<b>-0.42</b>	<b>-0.25</b>	<b>-0.34</b>	<b>-0.37</b>
6MWT distance (% pred)	<b>-0.41</b>	<b>-0.26</b>	<b>-0.35</b>	<b>-0.38</b>
BODE	<b>0.56</b>	<b>0.41</b>	<b>0.43</b>	<b>0.51</b>

## Correlations between VQ11 and SGRQ scores (n = 181 COPD patients)

	Functional	Psychological	Relational	Total
<i>SGRQ-C</i>				
Symptoms	<b>0.43</b>	<b>0.41</b>	<b>0.40</b>	<b>0.46</b>
Activity	<b>0.57</b>	<b>0.48</b>	<b>0.54</b>	<b>0.59</b>
Impact	<b>0.63</b>	<b>0.60</b>	<b>0.64</b>	<b>0.69</b>
Total	<b>0.66</b>	<b>0.61</b>	<b>0.65</b>	<b>0.71</b>

## Correlations between VQ11 and SF36 scores (n = 181 COPD patients)

	Functional	Psychological	Relational	Total
<i>MOS SF-36</i>				
Physical functioning	<b>-0.64</b>	<b>-0.50</b>	<b>-0.53</b>	<b>-0.62</b>
Physical role	<b>-0.45</b>	<b>-0.38</b>	<b>-0.36</b>	<b>-0.43</b>
Emotional role	<b>-0.28</b>	<b>-0.42</b>	<b>-0.36</b>	<b>-0.39</b>
Energy/vitality	<b>-0.44</b>	<b>-0.56</b>	<b>-0.54</b>	<b>-0.58</b>
Mental health	<b>-0.21</b>	<b>-0.46</b>	<b>-0.41</b>	<b>-0.41</b>
Social functioning	<b>-0.40</b>	<b>-0.53</b>	<b>-0.63</b>	<b>-0.59</b>
Bodily pain	<b>-0.40</b>	<b>-0.38</b>	<b>-0.46</b>	<b>-0.46</b>
General health perceptions	<b>-0.42</b>	<b>-0.54</b>	<b>-0.51</b>	<b>-0.55</b>
Physical Component Scale	<b>-0.52</b>	<b>-0.57</b>	<b>-0.56</b>	<b>-0.61</b>
Mental Component Scale	<b>-0.42</b>	<b>-0.61</b>	<b>-0.60</b>	<b>-0.61</b>

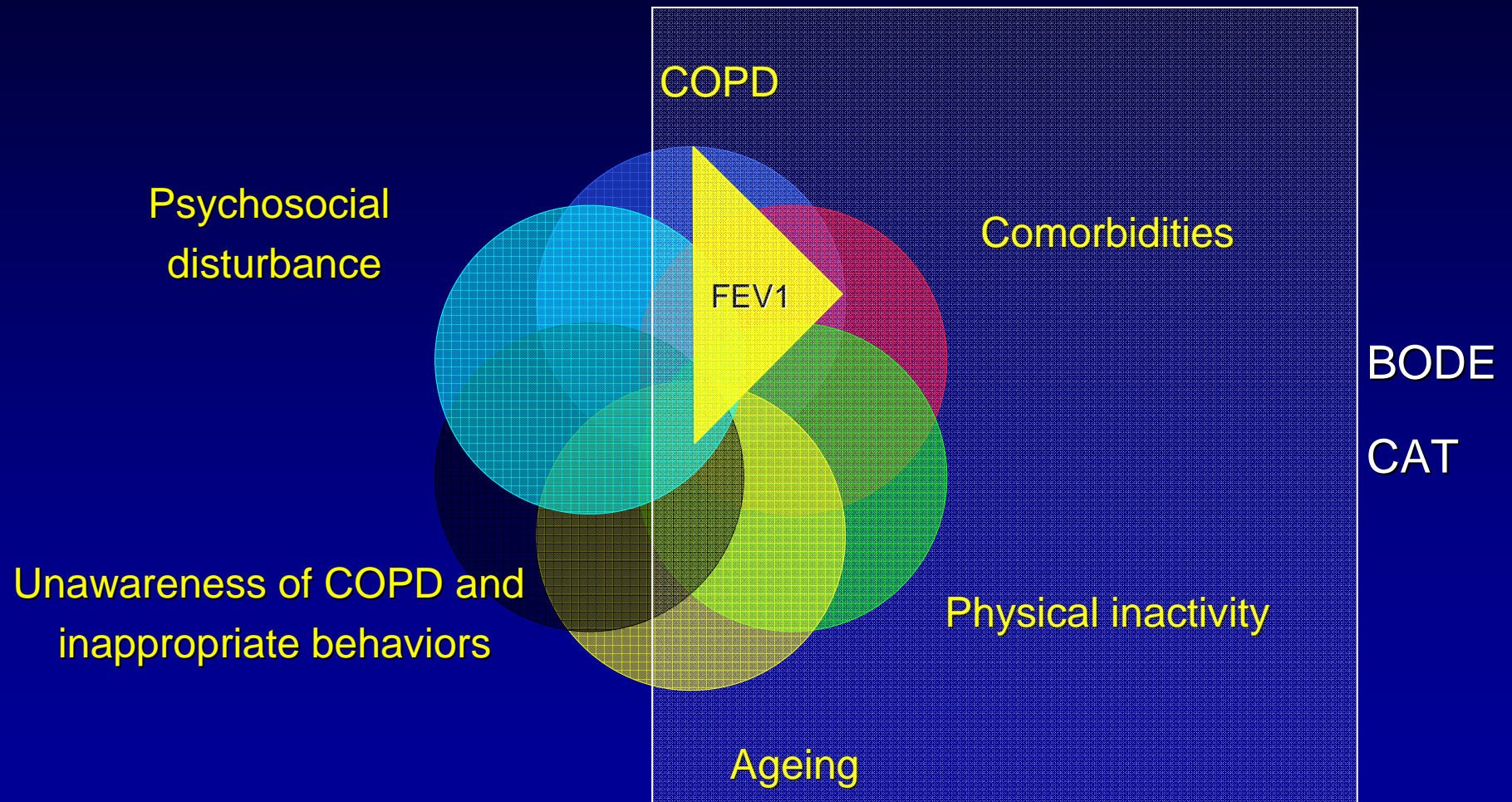
## Correlations of VQ11 scores (n = 181 COPD patients)

	Functional	Psychological	Relational	Total
HADS - Anxiety	<b>0.21</b>	<b>0.49</b>	<b>0.46</b>	<b>0.44</b>
HADS - Depression	<b>0.47</b>	<b>0.59</b>	<b>0.58</b>	<b>0.62</b>
HADS - Total	<b>0.39</b>	<b>0.63</b>	<b>0.61</b>	<b>0.61</b>
Physical self-worth	<b>-0.47</b>	<b>-0.62</b>	<b>-0.50</b>	<b>-0.59</b>

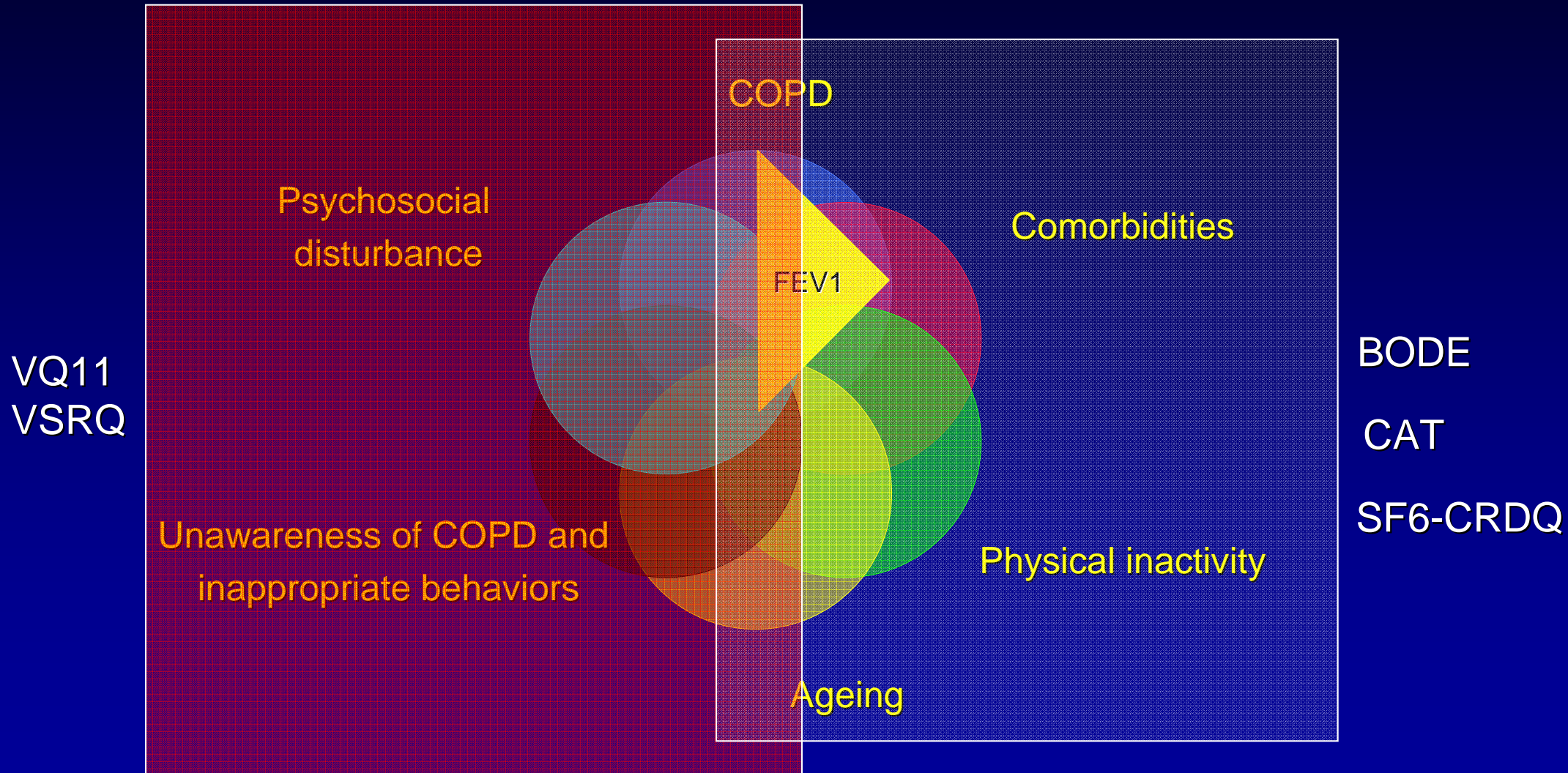
## Average scores of SGRQ-C and VQ11 according to BODE quartiles

BODE quartiles	1 (n=72)	2 (n=52)	3 (n=38)	4 (n=15)
SGRQ-C total	36.1 ± 13.8	48.4 ± 18.6	52.1 ± 17.3	61.8 ± 17.6
VQ11 total	22.5 ± 7.0	28.6 ± 8.8	31.3 ± 7.6	36.4 ± 5.6

## To assess COPD patient's quality of life

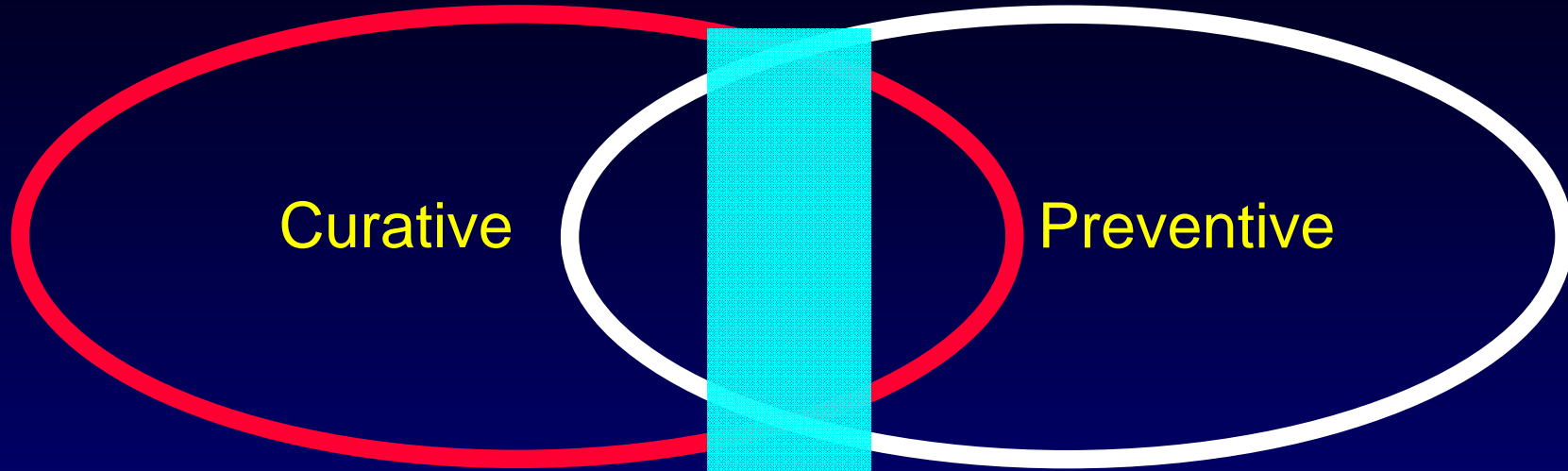


## To assess COPD patient's quality of life

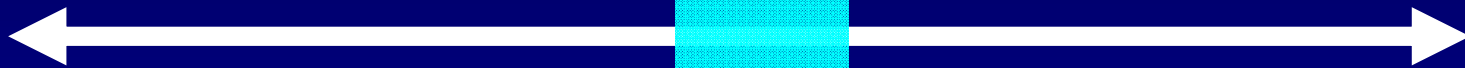


(in Préfaut & Ninot, 2009)

# HRQoL tests beliefs and values of medical staff

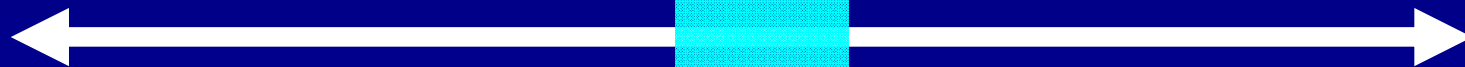


Factual



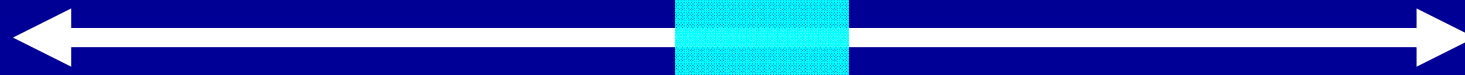
Occurrence  
risk

Survival



Well-being

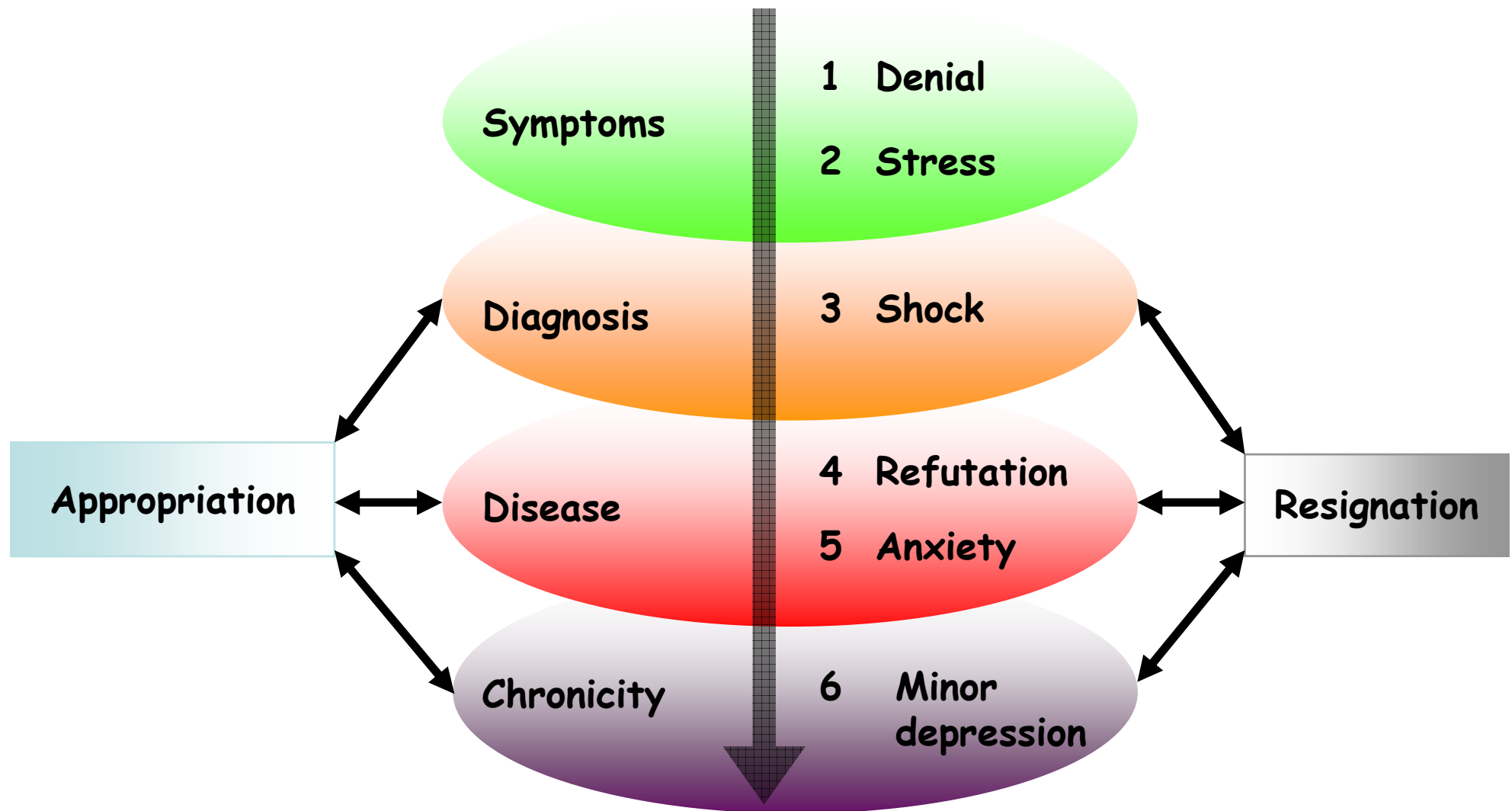
Urgent



Maintaining

**HRQoL**

## HRQoL, a marker of COPD appropriation



**Chronic disease appropriation** (Ninot & Roche, 2009)

Requested from learned societies and guardianship

Assess patient's feelings about its COPD and health behaviors

Make relation between clinical staff and patient easier, especially concerning systemic effects

Complete BODE and other routine measures of pneumology

Precede BODE when BODE is not possible to achieve

Will become a tool for screening

bad specific quality of life = bad treatment observance  
= exacerbation risk / death  
= « wild » consultation

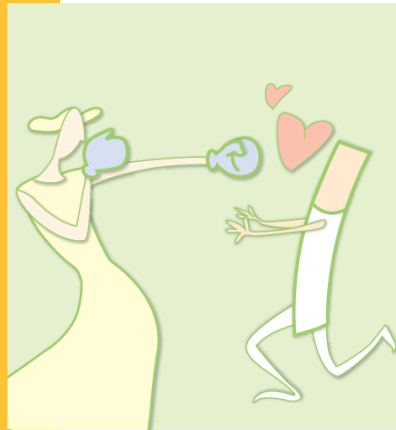
prescribe

= therapeutic education  
= consultation frequency / medications  
= respiratory rehabilitation

evaluate (MCID)

## Quelques informations et conseils

### 1 La BPCO : qu'est ce c'est ?



Une inflammation chronique des bronches responsable d'une diminution des capacités de souffle.

Le tabac est en cause dans plus de 80 % des cas. Les autres agents responsables sont les irritants professionnels et domestiques.

Elle provoque un essoufflement et une baisse de l'activité physique évoluant vers un affaiblissement musculaire.

L'état de santé se dégrade, la qualité de vie est altérée.

#### IMPORTANT

L'arrêt du tabac est fondamental, permettant une stabilisation voire une récupération partielle des capacités respiratoires. Sinon le déclin des capacités de souffle est inévitable.

### 2 Qu'est-ce qu'une exacerbation de BPCO ?

« Déstabilisation » passagère de l'état respiratoire : majoration de l'essoufflement, de la toux, des crachats, qui peuvent devenir sales.

Souvent d'origine infectieuse (virale ou bactérienne), plus rarement en relation avec l'exposition à des irritants bronchiques, à un pic de pollution.

Aidé par votre médecin, votre pneumologue, vous apprendrez à reconnaître cette exacerbation, à mieux la gérer à l'aide d'un plan d'action : prescription médicamenteuse adaptée, recours à un avis médical.

Vous êtes plus essoufflé, vos crachats sont plus abondants et deviennent jaunes-verdâtres : appelez votre médecin ou mettez en œuvre le plan d'action qui vous a été expliqué et fourni.



Pour en savoir plus, parlez en à votre médecin  
Consulter le site : [www.splf.org](http://www.splf.org)

Requested from learned societies and guardianship

Assess patient's feelings about its COPD and health behaviors

Make relation between clinical staff and patient easier, especially  
concerning systemic effects

Complete BODE and other routine measures of pneumology

Precede BODE when BODE is not possible to achieve

Will become a tool for screening, prescribe and evaluate

Anticipate evolution of patient « consumer » / QALY / efficacy measure

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### Questionnaire de qualité de vie **BPCO-VQ11**

Nom \_\_\_\_\_ Prénom \_\_\_\_\_

Date \_\_\_\_ / \_\_\_\_ / 20\_\_\_\_

Les phrases suivantes expriment des sentiments sur les conséquences d'une maladie respiratoire. Pour chacune, cochez l'intensité qui vous correspond le mieux maintenant. Aucune réponse n'est juste, elle est avant tout personnelle.

		Pas du tout	Un peu	Moyennement	Beaucoup	Extrêmement
1	Je souffre de mon essoufflement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Je me fais du souci pour mon état respiratoire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Je me sens incompris(e) par mon entourage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Mon état respiratoire m'empêche de me déplacer comme je le voudrais	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Je suis somnolent(e) dans la journée	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Je me sens incapable de réaliser mes projets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Je me fatigue rapidement dans les activités de la vie quotidienne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Physiquement, je suis insatisfait(e) de ce que je peux faire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Ma maladie respiratoire perturbe ma vie sociale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Je me sens triste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Mon état respiratoire limite ma vie affective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

S'il vous plait, vérifiez d'avoir répondu à chaque question. En vous remerciant.

	Somme
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<b>Total</b>	

FFP Fédération Française de Pneumologie  
FFAIR  
ER  
SPF

# Acknowledgements

## Learned societies

SPLF

Alvéole

FFP

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FFAIR

ANTADIR

## Laboratory

GSK

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Clinique du Souffle La Vallonie

Réseau AIR+R (Languedoc-Roussillon)

CHRU Montpellier

CHU Bécclère (Paris)

CHU Saint-Antoine (Paris)

And...

patients who participated to the studies

professionals that enabled their execution