



# Overview

## Patient Reported Outcomes (PROs) Add Value to the Evaluation of New Treatments

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# Outline

## **Patient Reported Outcomes .....**

- ◆ Are Key measures of treatment outcome in some disease areas
- ◆ Complement traditional endpoints to evaluate significance of treatment effect from the patient's perspective
- ◆ Facilitate Patient Involvement in treatment decision making
- ◆ Facilitate decision making on value of a new treatment

**.....Add Value to the Evaluation of New Treatments**



# Patient Outcomes Assessment Sources and Examples

**Clinician - Reported**

For example,  
Global impressions  
Observation & tests  
of function

**Physiological**

For example,  
FEV<sub>1</sub>  
HbA1c  
Tumor size

**Caregiver - Reported**

For example,  
Dependency  
Functional status

**Patient - Reported**

For example,  
Symptom severity  
Symptom bother  
Functional status  
Symptoms  
HRQoL  
(Health Related  
Quality of Life)



# PROs are key measures of treatment outcome in some diseases

- ◆ When there are no objective marker of Symptoms

- Rhinitis, Functional GI disorders

- ◆ When there are no objective markers of the Impact of Symptoms

- Sexual Dysfunction, Insomnia



# PROs complement traditional clinical endpoints - 1/3

## PROs are Key Secondary endpoints for efficacy when:

- ◆ Disease is characterised by several possible measures
  - Symptoms: Asthma, COPD, Psoriasis, BPH
  - Functioning: Parkinson's Disease, MS, Arthritis, Stroke, TBI
- Aim of treatment is to improve/maintain function
  - Parkinsons Disease, Stroke , Arthritis
  - Treatment has a small impact on survival, as in Oncology



Comments?



## PROs Complement Clinical endpoints- 2/3

### ◆ Help to characterise the treatment effect

- ◆ **Hypertension** - Captopril vs. methyldopa: Similar BP control; higher general well-being, life satisfaction, (Less AEs). (*Croog et al 1986*)
- ◆ **GERD** - Ranitidine vs. omeprazole (10 and 20mg): Similar symptom relief. PGWB scores higher for omeprazole. (*Wiklund et al, 1998*)
- ◆ **Migraine** - Rizatriptan: Used for dose selection. 5 and 10 mg significantly more efficacious than placebo, however patients on 10 mg had better scores on HRQoL domains (*Santanello et al, 1997*)
- ◆ Higher doses may have higher efficacy but more side-effects and be reflected in HRQoL or Treatment Satisfaction measures



# PROs Complement clinical endpoints-<sup>3/3</sup>

## Correlation between patient and clinician perceptions ?

### ❖ **Asthma**

Variability in exercise capacity contributed to only 3% of the variability on a patient self-report questionnaire (the BPQ) (*Yohannes AM et al 1998*)

### ❖ **Pain**

Physicians seem to underestimate pain when compared to patient ratings (*Surez-Almzor, 2001*)

### ❖ **HIV**

Patient self report of symptom bother and frequency were greater than clinician assessments. (*Justice et al 1999 and 2001*)

### ❖ **PAOD**

Correlation between hemodynamic parameters and HRQoL are low (*Muller-Buhl et al, 1999 and 2003*)

### ❖ **Osteoarthritis**

Discordance between radiographic arthritis, physician based diagnosis and patient reported pain (*Hannan et al 2000*)



*Do they Add Value  
When they are Highly correlated?*



# PROs facilitate patient involvement in treatment decision making <sup>-1/2</sup>

## **Enable health care providers explain the effects of a treatment from a patients' perspective**

### ◆ Trade-off of efficacy vs. safety

Quality of life assessments provide an overall evaluation of the patient's experience of the disease and treatment

Examples as mentioned in the characterisation of treatment



# PROs facilitates patient involvement in treatment decision making –2/2

- ◆ The patient can use the PRO instrument to recall and summarise health related aspects
  - ◆ Symptoms, Impact on Daily Activities, Quality of life
- ◆ Facilitates doctor-patient communication, improving service delivery
  - ◆ Helps identify physical or psychosocial problems that may have been missed
  - ◆ Helps monitor the course of the disease-improvement and deteriorations, to enable review of therapeutic plans



# PROs provide guidance to make health care decisions <sup>1/2</sup>

## Predict response to treatment

### ◆ COPD

- In addition to FEV, health status (SGRQ) scores were independent predictors of mortality in a cohort of male COPD patients (*Domingo-Salvany, et al. 2002; Almagro et al, 2002*)
- Low health status scores (SOLQ, SF-36) predicted resource use/hospitalisation in COPD patients. (*Desikan et al 2002; Fan et al , 2002*)

### ◆ Dyspepsia

- Number of days with epigastric pain....low impairment of vitality domain (PGWBI) were positive predictors of outcome of treatment with a proton pump inhibitor in functional dyspepsia (*E-Bolling-Sternevald e al, 2003*)

### ◆ Oncology

- Changes over time in self-report endpoints forecasts outcomes in advanced lung cancer (*Eton et al, 2003*)



# Provide guidance to make health care allocation decisions <sup>2/2</sup>

## Help to understand the burden of illness

### ❖ GERD

Scores on most domains of the SF-36 were lower than that of the US population norm and patients with Diabetes. (*Wiklund, et al; 2003*)

### ❖ Atopic Dermatitis

Psychological problems due to stigma, aggravation of the itch-scratch-cycle during flare-ups, sleeplessness, lack of concentration in school/work (*Finlay, 2001*)

### ❖ Nocturia

Incremental increases in the number of nocturnal voids have negative effects on sleep and HRQoL (*Coyne, 2003*)



# Professional organisations recognise the role of PROs<sup>- 1/2</sup>

- ◆ WHO consensus, 1999, EAU Guidelines- BPH  
Treatment choice based on level of bother. Aim of treatment is to improve HRQoL
- ◆ GOLD guidelines. BTS, ATS guidelines COPD  
Treatment objective: improve health status/function
- ◆ OMERACT 2000- Rheumatology  
Recommends measure of disability by patient
- ◆ Health care Allocation authorities  
PRO outcomes considered (using utility values) in the evaluation of new medicines for reimbursement and formulary listing  
UK, Finland, Sweden, Portugal, Norway, Netherlands



# Professional organisations recognise the role of PROs<sup>- 2/2</sup>

## CPMP guidelines

### ❖ Cardiac failure

Broad based assessment of QoL is recommended because all components of life quality may be influenced by an intervention for heart failure  
CPMP/EWP235/95,Rev. 1

### ❖ Irritable Bowel Syndrome

Psychosocial status and health related QoL must be..considered as important secondary endpoints...CPMP/EWP/785/97

### ❖ HRQoL is also mentioned as secondary endpoint in Notes for Guidance:

ALS, Asthma, Cancer, CHF, COPD, Crohns, IBS, Osteoarthritis, PAOD, RA, Stable Angina, Urinary Incontinence, Weight Control



# Summary

## **Patient Reported Outcomes Add Value to the Evaluation of Treatments because they -**

- ◆ Are key measures of treatment outcome in some disease areas
- ◆ Complement traditional endpoints to evaluate significance of treatment effect from the patient's perspective
- ◆ Facilitate Patient Involvement in treatment decision making
- ◆ Facilitate clinical and healthcare allocation 'decision making' on the value of a new treatment

They are also recognised as valuable endpoints

by Professional Organisations