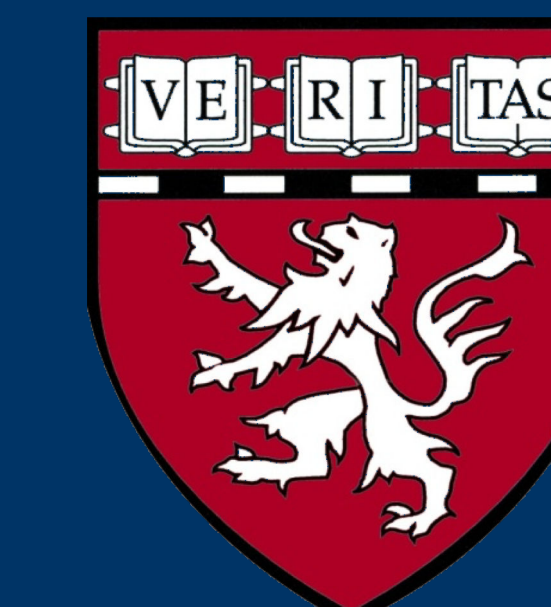# Different Wording of the Patient Global Leads to Different Rating of Disease Activity.

H.Radner[1, 2], P.Studenic[1], S.B.Cohen[3] N.Shadick[2], C.Iannaccone[2], E.Lie[4], M.Dahl Mjaavatten[4], M.L. Cohen[3], J.S.Smolen[1], D.Aletaha[1]

[1]Department of Internal Medicine III, Division of Rheumatology, Medical University Vienna, Austria; [2] Division of Rheumatology, Immunology and Allergy; Brigham and Women's Hospital, Boston, MA, USA; [3]Metroplex Clinical Researc Center, Dallas, TX, USA; [4]Department of Rheumatology, Diakonhjemmet Hospital, Oslo, Norway;

TUE 2646

Background

- The patient global assessment of disease activity (PtGA) is a key variable in assessing RA disease activity and remission (REM).

- The typical wording *'Considering all of the ways your arthritis has affected you, how do you feel your arthritis is today?'* may be misinterpreted by patients, not addressing symptoms related to RA.

Study Aim

To investigated how different wordings of the question influence results obtained for the PtGA.

Methods

STUDY COHORT:

- International, multicenter study including 4 centers in US and Europe
- RA Patients with various disease activity and disease duration were included

METHODS:

- Patients were asked to fill in 1 visual analogue scale (VAS) of global health and 6 VAS of differently phrased PtGA covering 2 aspects (**figure 1**):

  A) Wording aspect: to compare traditional phrasing of PtGA (PtGA-trad) with a version including a more detailed explanation of RA disease activity (PtGA-expl)

  B) Time aspect: to investigate the impact of different reference periods (today, last week, last month)

STATISTICAL ANALYSES:

- Intra-class correlation (ICC) to assess agreement of different PtGAs
- T-test to compare mean values of different PtGA
- Fill in different PtGA in Boolean and CDAI remission criteria and compare frequencies fulfilling REM using differently phrased PtGA

Results

Figure 1. Schematic illustration of study design using different wording of the Patient global of disease activity (PtGA)
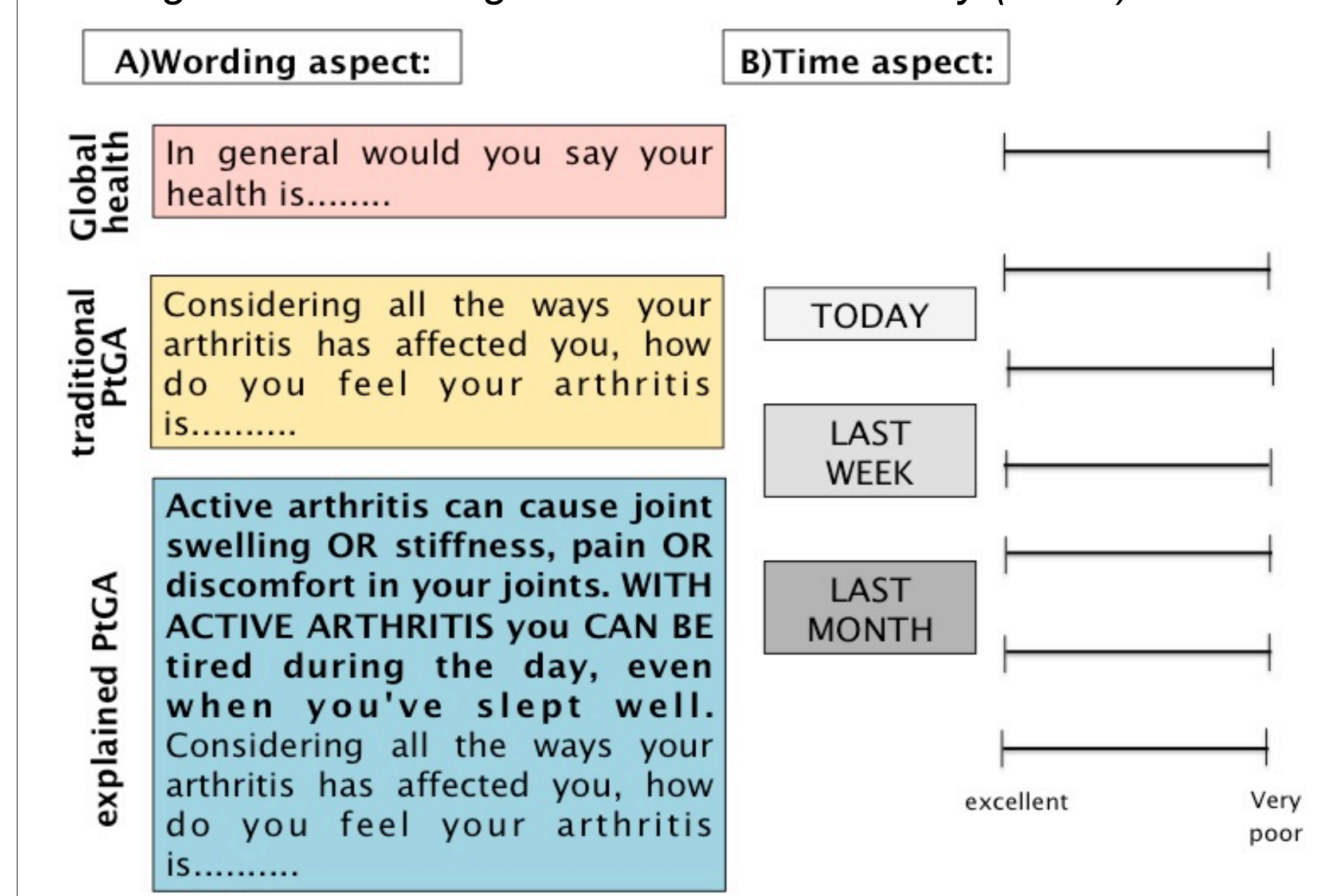
Table 2 Intra-class correlation assessing agreement of Patient global of disease activity (PtGA) using different wording (expl explained; trad traditional wording) and reference periods

DIFFERNT WORDING OF PtGA	PtGA -Expl. Today	PtGA -Expl. Last week	PtGA -Expl. Last month	Global health
PtGA - trad. Today	0.89 (0.83-0.92)	0.87 (0.81-0.91)	0.83 (0.75-0.88)	0.61 (0.48-0.72)
PtGA - trad. Last week	0.90 (0.85-0.93)	0.91 (0.87-0.94)	0.88 (0.83-0.92)	0.65 (0.53-0.75)
PtGA - trad. Last month	0.83 (0.75-0.88)	0.86 (0.79-0.90)	0.86 (0.80-0.90)	0.65 (0.52-0.75)
PtGA - expl. Today	1	0.94 (0.92-0.96)	0.92 (0.89-0.95)	0.55 (0.41-0.68)
PtGA - expl. Last week	0.94 (0.92-0.96)	1	0.95 (0.92-0.96)	0.56 (0.41-0.69)
PtGA - expl. Last month	0.92 (0.89-0.95)	0.95 (0.92-0.96)	1	0.53 (0.37-0.65)
Global health	0.55 (0.41-0.68)	0.56 (0.41-0.69)	0.53 (0.37-0.65)	1

**Table 1.** Baseline characteristics of the study cohort (n=105)

Mean (standard deviation) / percent of patients (%)	
Age (years)	57.7 (13.1)
Disease duration (years)	17.9 (10.4)
Female (%)	84.8%
Seropositive (%)	82.5%
Erosive disease (%)	69.9%
Ethnicity (white %)	91.4%
Swollen joint count	1.5 (2.4)
Tender joint count	1.6 (3.9)
VAS fatigue (mm)	26.7 (25.3)
VAS pain (mm)	21.2 (22.3)
Evaluator global of disease activity (mm)	15.3 (15.8)
Health assessment questionnaire (HAQ)	0.4 (0.5)
C-reactive protein	0.6 (1.7)
DMARDs (%)	
Synthetic DMARDs only	34.3%
Biological DMARDs (mono or combination)	62.9%
Steroids (%)	28.8%
Number of comorbid conditions; median(25th/75th percentile)	0 (0/2)

Table 3. T-Test comparing mean values of Patient global of disease activity using different wording and reference periods

Reference period	Traditional phrasing	Explained phrasing	p-value
TODAY	23.7±21.7	27.3±23.2	<0.01
LAST WEEK	24.0±20.8	26.5±22.3	<0.01
LAST MONTH	24.5±21.2	30.8±25.5	<0.01

Figure 2. Percentage of patients fulfilling Boolean and CDAI (clinical disease activity index) Remission
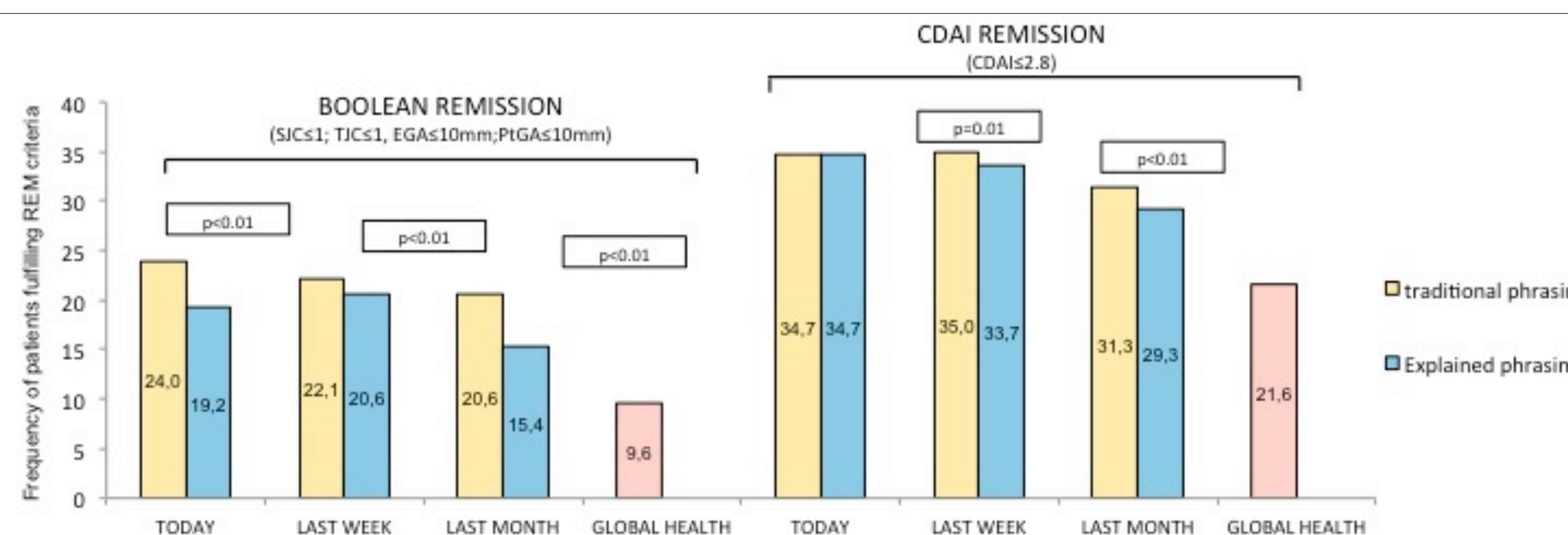
Results Summary

- 105 randomly selected patients (age 57.7 ± 13.1 years, disease duration 17.9 ± 10.4 years; 84.8% female, 91.4% white, 82.5% seropositive) participated in the study (**table 1**)

INTRA-CLASS CORRELATION OF DIFFERENT PtGA (**table 2**):

- ICC was high between traditional and explained PtGA (0.83 to 0.91), irrespective of reference period
- Lower ICC was found between VAS global health and PtGA (traditional and explained; ICC 0.53 to 0.65)
- In Patients with ≥1 comorbid condition, no differences between explained and traditional PtGA could be observed

COMPARISON OF MEAN VALUES OF DIFFERENT PtGA (**table 3**):

- Significantly higher mean values of explained PtGA compared to traditional PtGA were found, irrespective of the reference period

FULFILLMENT OF REMISSION USING DIFFERENT PtGA (**figure 2**):

- By using explained PtGA significantly fewer patients fulfilled CDAI and Boolean REM criteria compared to using the traditional phrasing of PtGA
- Lowest frequency of REM was found when using VAS global health

Conclusions

Against our expectations, a more detailed explanation of "disease activity" led to higher ratings on the PtGA scale, and lower REM rates. It appears to increase awareness of and attention to specific symptoms related to RA disease activity, which would otherwise be discounted.