

# The Real-World Observational Prospective Study of Health Outcomes with Dulaglutide and Liraglutide in Type 2 Diabetes Patients (TROPHIES): Patient-Reported Outcomes at Baseline

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## OBJECTIVE

To describe perspectives of patients with type 2 diabetes (T2D) regarding their overall quality of life, treatment satisfaction, work productivity at baseline, before they initiate their first injectable treatment with once-weekly dulaglutide (dula) or once-daily liraglutide (lira)

## STUDY DESIGN

TROPHIES is a 24-month, prospective, observational study conducted in France, Germany, and Italy, in adult patients with T2D, who were naive to any injectable treatment and initiating their first injectable anti-hyperglycemic treatment with either dulaglutide or liraglutide

### TROPHIES Schedule for Patient-Reported Outcomes

Questionnaires	Visit 1 Day 0	Visit 2, 3, 4 Month 6, 12, 18	Visit 5 Month 24
DTSQs	X	X <sup>i</sup>	X <sup>i</sup>
DTSQc <sup>iii</sup>		X <sup>i,ii</sup>	
EQ-5D-5L		X <sup>i</sup>	X <sup>i</sup>
DPM	X	X <sup>i</sup>	X <sup>i</sup>
IW-SP	X	X <sup>i</sup>	X <sup>i</sup>
DID-EQ <sup>iv</sup>		X <sup>i</sup>	X <sup>i</sup>

<sup>i</sup>Should the patient see the physician more than once during a ±45-day visit window, the questionnaires should be completed only once, at the first of these visits.

<sup>ii</sup>At month 6 visit only, or, in case of early discontinuation, prior to month 6 only.

<sup>iii</sup>DTSQc is the Diabetes Treatment Satisfaction Questionnaire Change.

<sup>iv</sup>DID-EQ is the Diabetes Injection Device-Experience Questionnaire.

## KEY RESULT

### Mean Patient-Reported Outcomes Scores at Baseline

Characteristics	Dula	Lira	Total	p-value <sup>a</sup>
<b>DTSQs</b>				
n	1094	994	2088	
mean (SD)	24.63 (8.03)	25.76 (7.46)	25.17 (7.79)	<0.001
<b>DTSQs-Hyperglycemia</b>				
n	1096	995	2091	0.675
mean (SD)	3.28 (1.88)	3.32 (1.93)	3.30 (1.90)	
<b>DTSQs-Hypoglycemia</b>				
n	1095	995	2090	0.769
mean (SD)	1.37 (1.70)	1.35 (1.69)	1.36 (1.69)	
<b>EQ-5D-5L</b>				
n	1103	1018	2121	
mean (SD)	0.84 (0.21)	0.83 (0.23)	0.83 (0.22)	0.230
<b>EQ-VAS</b>				
n	1102	1017	2119	
mean (SD)	67.53 (19.74)	67.49 (17.90)	67.51 (18.88)	0.964
<b>IW-SP</b>				
n	1098	1010	2108	
mean (SD)	59.83 (31.27)	61.33 (30.5)	60.55 (30.9)	0.266
<b>DPM-Life productivity score</b>				
n	1103	1011	2114	
mean (SD)	78.58 (22.75)	79.51 (21.61)	79.03 (22.21)	0.340
<b>DPM-Work productivity score</b>				
n	731	561	1292	
mean (SD)	87.45 (18.11)	86.84 (17.35)	87.19 (17.78)	0.540

<sup>a</sup>p-values for treatment effect were computed using Chi Square test for categorical and T-test for continuous variables  
n, number of patients who completed the questionnaire; SD, standard deviation

## Background

- Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) are typically the first injectable therapy recommended for T2D, offering improved glycemic control in addition to other health benefits<sup>1,2</sup>
- Non-interventional observational studies can complement established clinical data by gathering real-world data for patients commencing GLP-1 RA therapy
- The measurement of patient-reported outcomes (PROs) in clinical practice is important as it complements clinical assessments
- The observational study, TROPHIES\*, measures and assesses the PROs that are associated with the initiation of dula and lira in a sample of patients across three countries: France, Germany, and Italy

## Methods

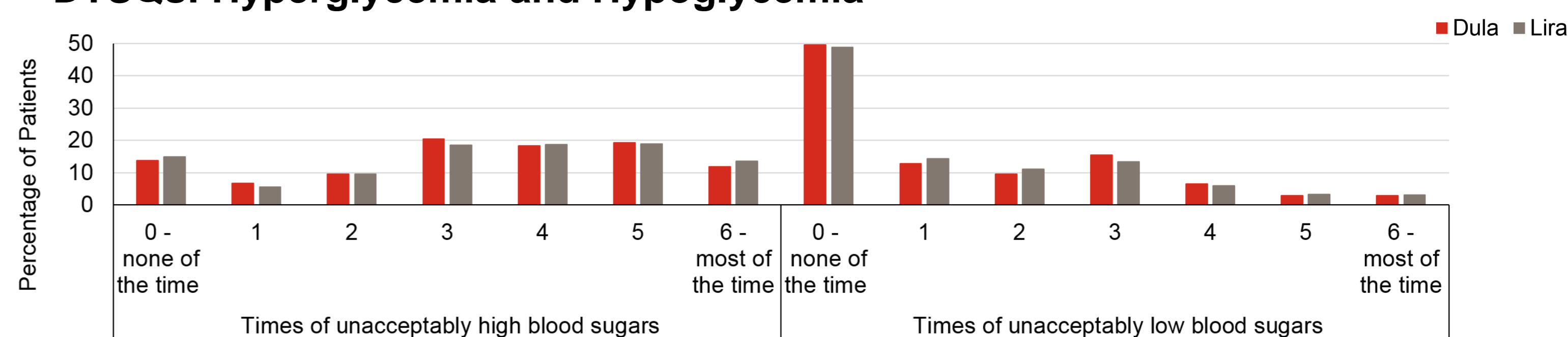
### Patient-Reported Outcomes Questionnaires at Baseline

Diabetes Treatment Satisfaction Questionnaire Status (DTSQs)	<ul style="list-style-type: none"> <li>Satisfaction with treatment, as well as concerns about hyperglycemia and hypoglycemia</li> <li>Eight items measured: satisfied with current treatment, feel convenient about recent treatment, feel flexible about recent treatment, satisfied with diabetes understanding, recommend present treatment to others, continue with present treatment, times of unacceptably high blood glucose, times of unacceptably low blood glucose</li> <li>Items concerning times of unacceptably high and low blood glucose, are scored separately from the satisfaction items and from each other</li> <li>Scale 0–36</li> </ul>
EQ-5D-5L	<ul style="list-style-type: none"> <li>Measures health status</li> <li>Five dimensions measured: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression</li> <li>Scale 0–1</li> <li>EQ-VAS, recording the respondents self-rated health status, was measured in conjunction with EQ-5D-5L on a 0 to 100 scale</li> </ul>
Diabetes Productivity Measure (DPM)	<ul style="list-style-type: none"> <li>Life and work productivity impairments associated with diabetes</li> <li>Fourteen items measured: low blood sugar interfere activities, the difficulty to perform work, the difficulty to control emotions, feel less productive at work, miss work, need to reschedule time for work, prevents you from reaching short-term goals, prevents you from reaching long-term goals</li> <li>2 stand-alone items included in the DPM, measuring short and long-term goals, are reported separately</li> <li>Scale 0-100</li> </ul>
Impact of Weight on Self-Perceptions (IW-SP)	<ul style="list-style-type: none"> <li>Patients' self-perception related to their body weight</li> <li>Three items measured: feel unhappy with appearance due to weight, feel self-conscious in public due to weight, feel unhappy due to comparing weight with others</li> <li>Scale 0-100</li> </ul>

- Responses to the PRO questionnaires were collected, before patients initiated treatment with dulaglutide or liraglutide, to provide the perspectives of patients at the time of enrolment (baseline)
- Higher scores reflect better outcomes, except for DTSQs - hyperglycemia and hypoglycaemia scores, where higher scores indicate problems with blood glucose levels

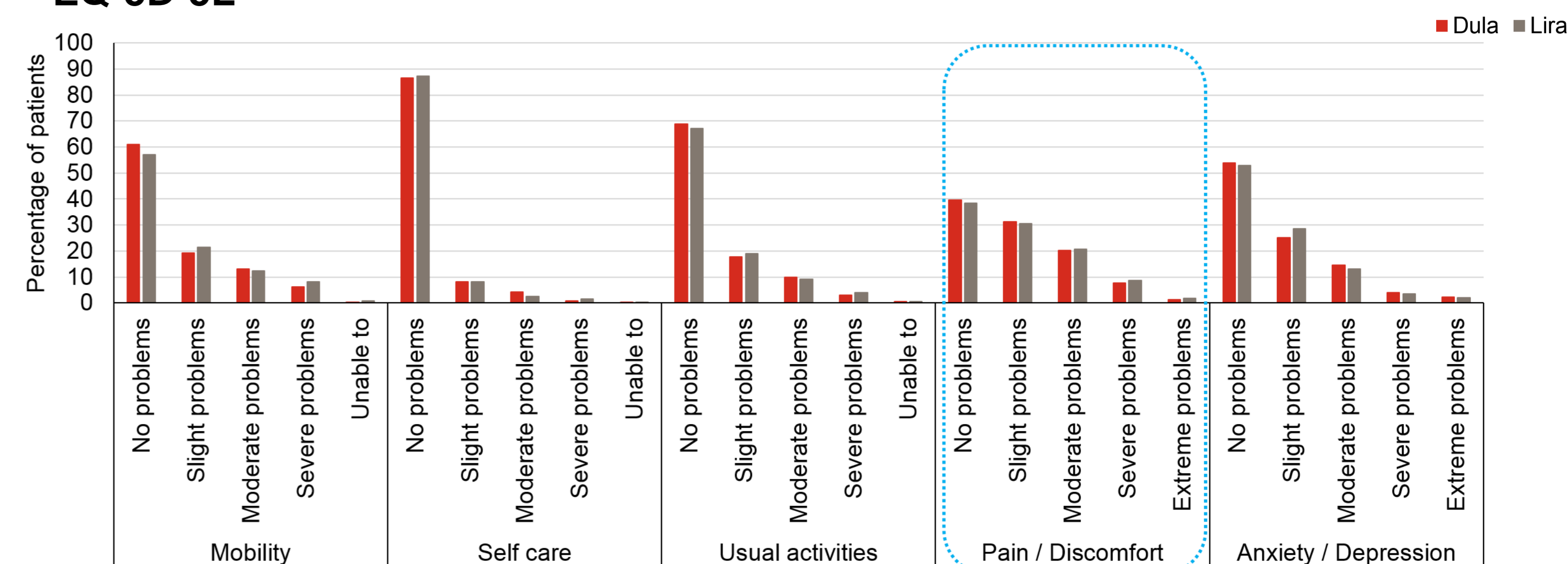
## Additional Results - PROs at Baseline

### DTSQs: Hyperglycemia and Hypoglycemia



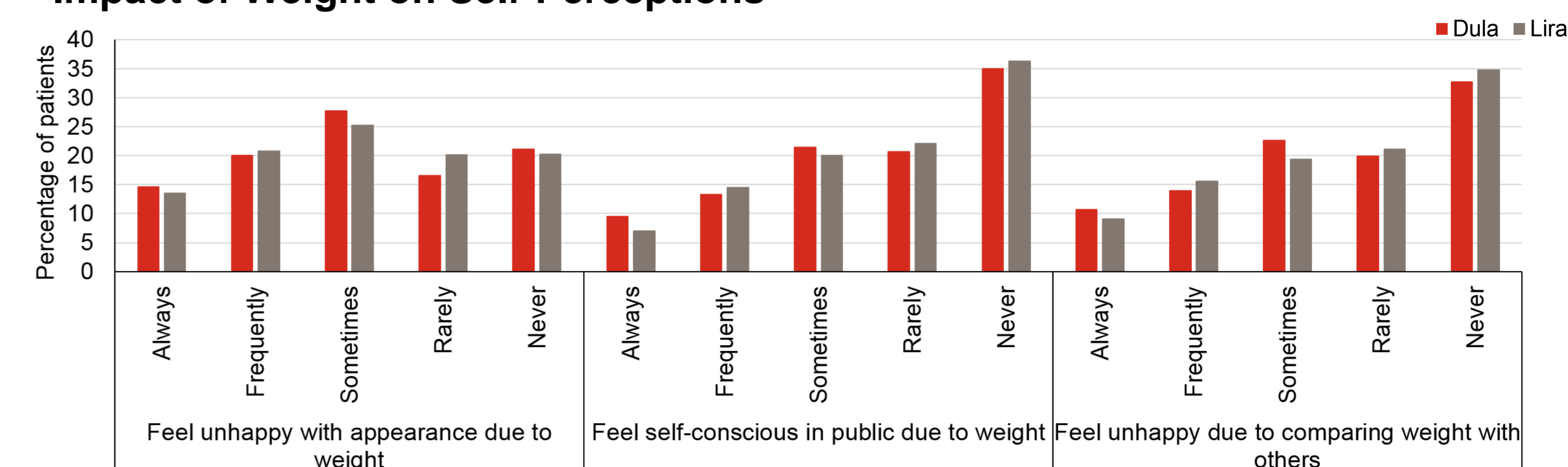
- More patients reported “no unacceptably low blood sugars” than “unacceptably high blood sugars”

### EQ-5D-5L



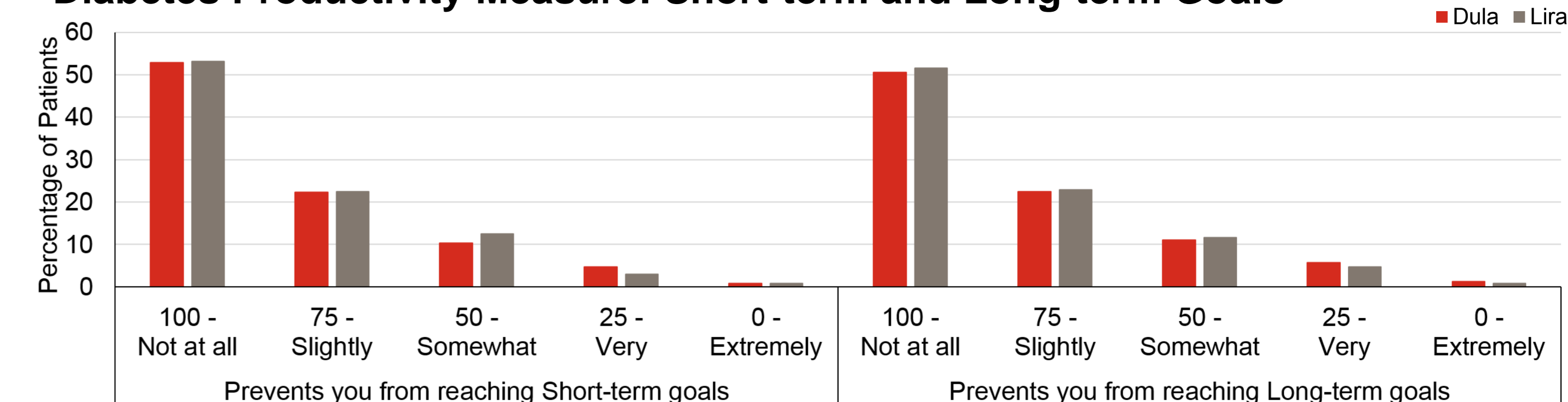
- More than 50% of patient populations reported no problems for four EQ-5D-5L dimensions, while more than 60% of patient populations experienced slight to severe pain or discomfort

### Impact of Weight on Self-Perceptions



- Both cohorts have similar reported weight-related self-esteem

### Diabetes Productivity Measure: Short-term and Long-term Goals



- More than 50% of patient populations reported no Long-term or Short-term goal impairments associated with T2D
- The Short-term goal mean (SD) is 83.36 (23.37) and 83.81 (22.31), and the Long-term goal mean is 81.67 (24.78) and 82.49 (23.67) for dula and lira

## CONCLUSIONS

The TROPHIES PRO parameters evaluated at baseline provide an overall understanding of the quality of life, treatment satisfaction and work productivity across cohorts

- Overall, the DTSQs score indicated moderate patient satisfaction with their previous T2D treatment
- EQ-5D-5L domain that was most impacted was pain/discomfort dimensions
- The overall IW-SP score indicated that patients were impacted by weight-related self-perceptions
- The DPM-Life productivity scores in both cohorts were lower than the DPM-Work productivity scores
- A potential study limitation is that the overall patient population may not be fully representative of patients who are initiating dulaglutide and liraglutide

\*See posters PDB116 and PDB82 for the TROPHIES study design and country-specific results at baseline

### Reference:

- Davies MJ *et al. Diabetologia.* 61:12, 2461-2498 (2018).
- American Diabetes Association. Standards of medical care in Diabetes 2018. *Diabetes Care.* 41, S1 (2018).

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