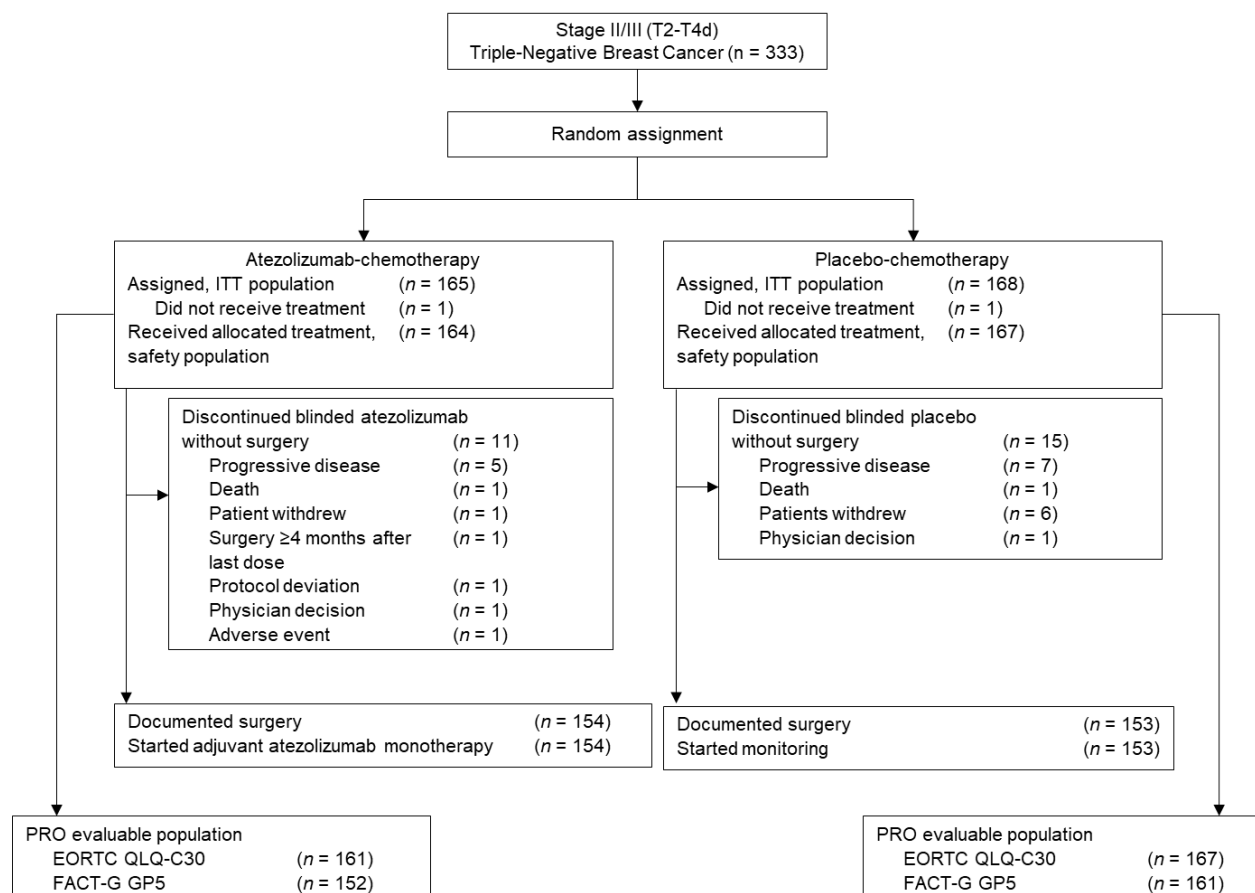


Supplementary figures and tables

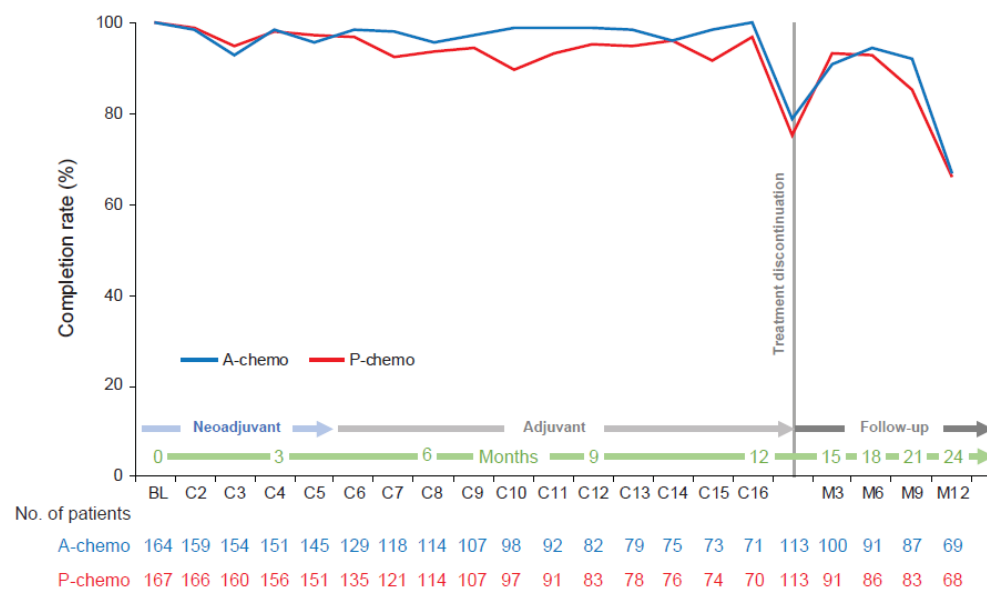


Supplementary Figure 1. CONSORT diagram for the patient-reported outcome analyses from the IMpassion031 study.

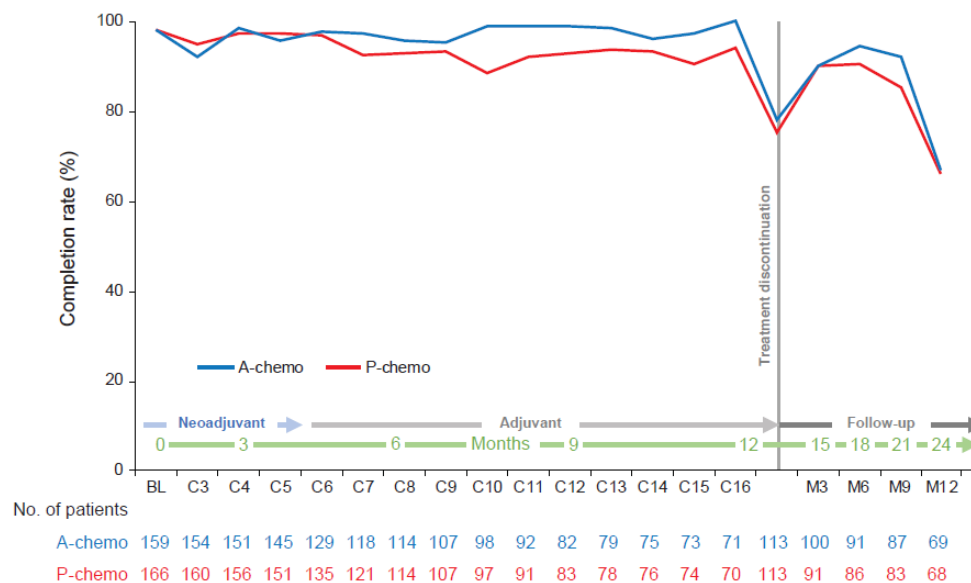
EORTC, European Organisation for Research and Treatment of Cancer; FACT-G, Functional Assessment of Cancer Therapy-General; ITT, intention to treat; PRO, patient-reported outcome.

Adapted from Mittendorf EA, et al. *Lancet* **2020**;396:1090-100.

A)

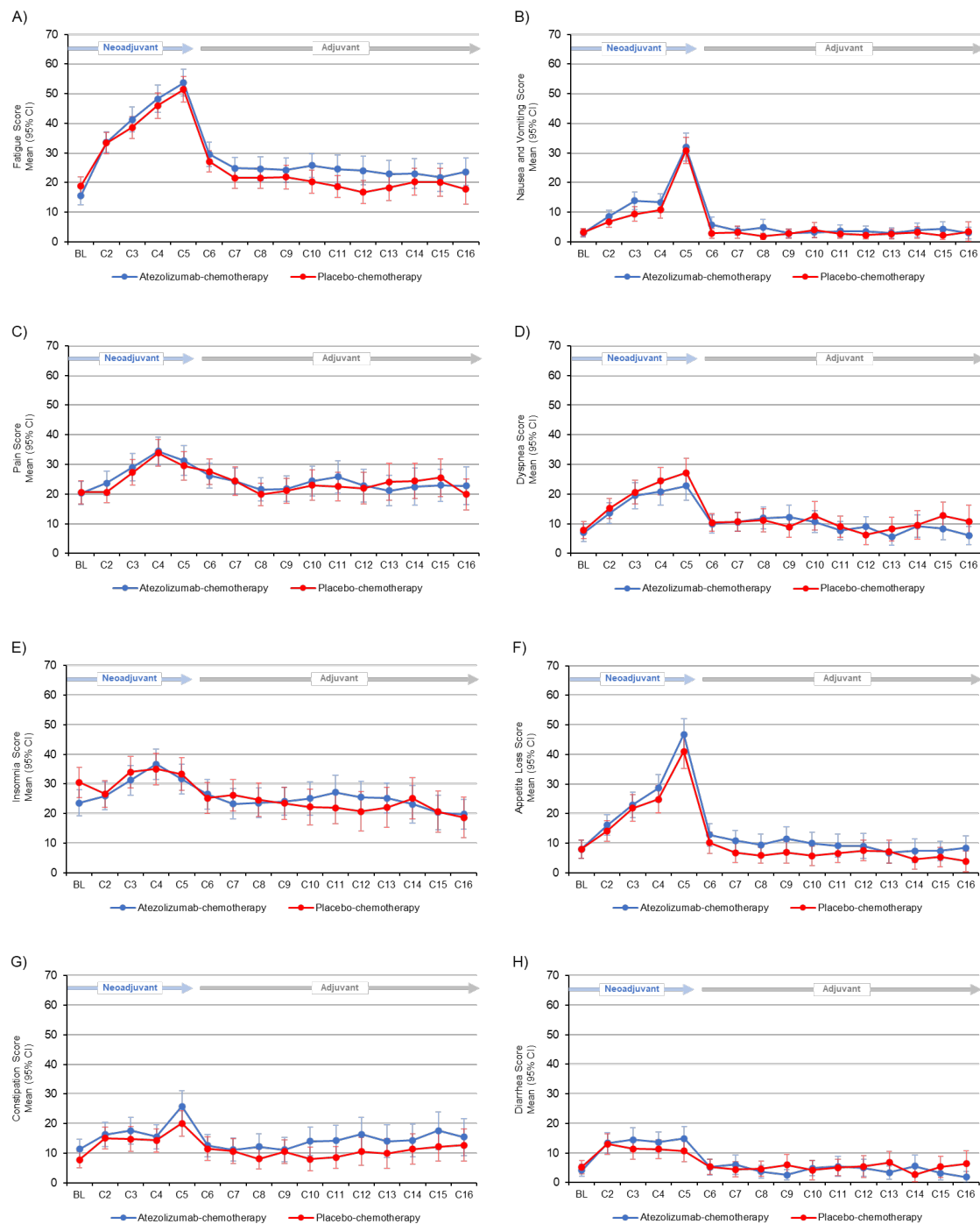


B)



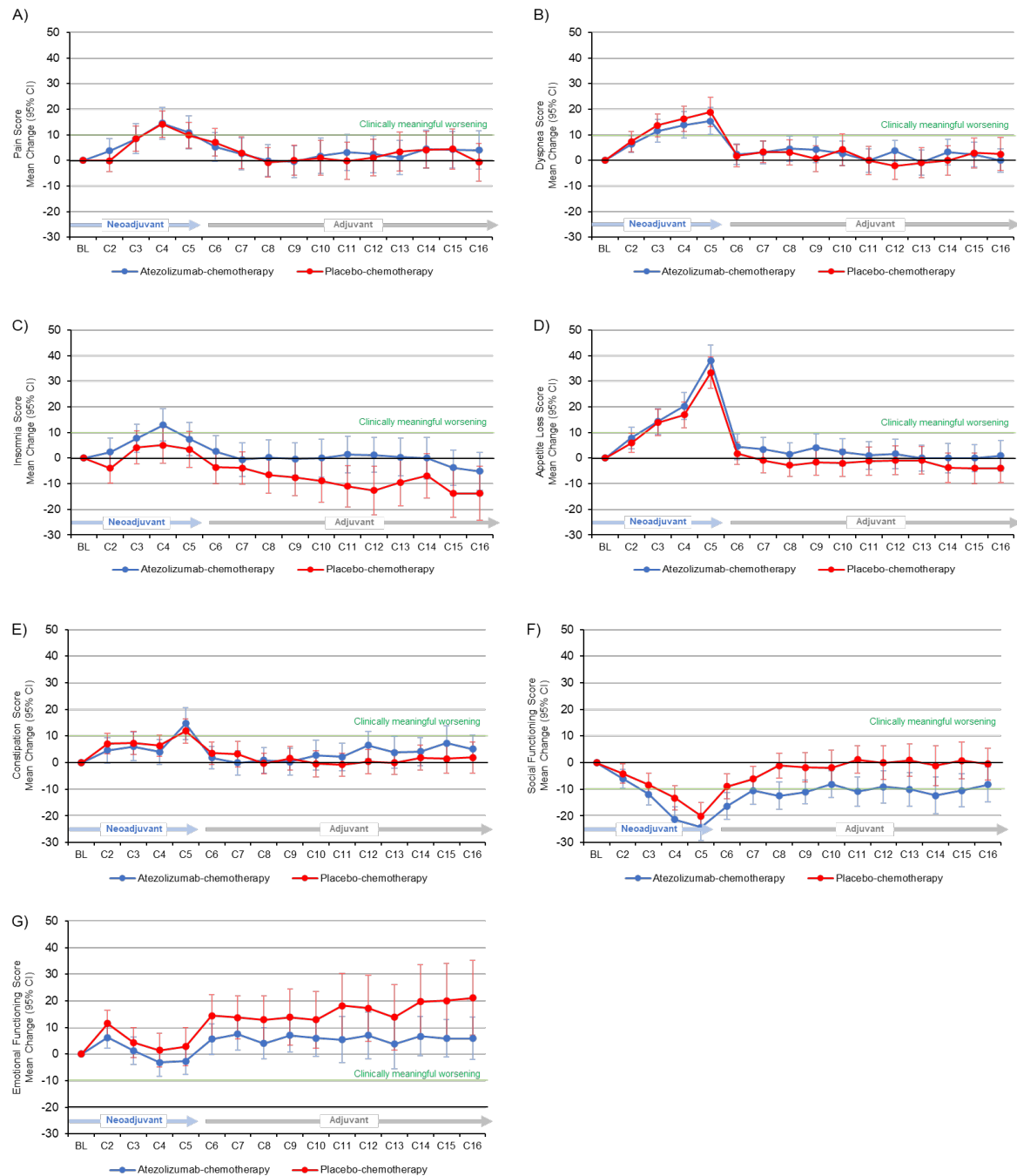
Supplementary Figure 2. Completion rates among all randomized patients.

Completion rates among all randomized patients for the (A) EORTC QLQ-C30 and (B) FACT-G GP5. A, atezolizumab; BL, baseline; C, cycle; M, month; P, placebo.



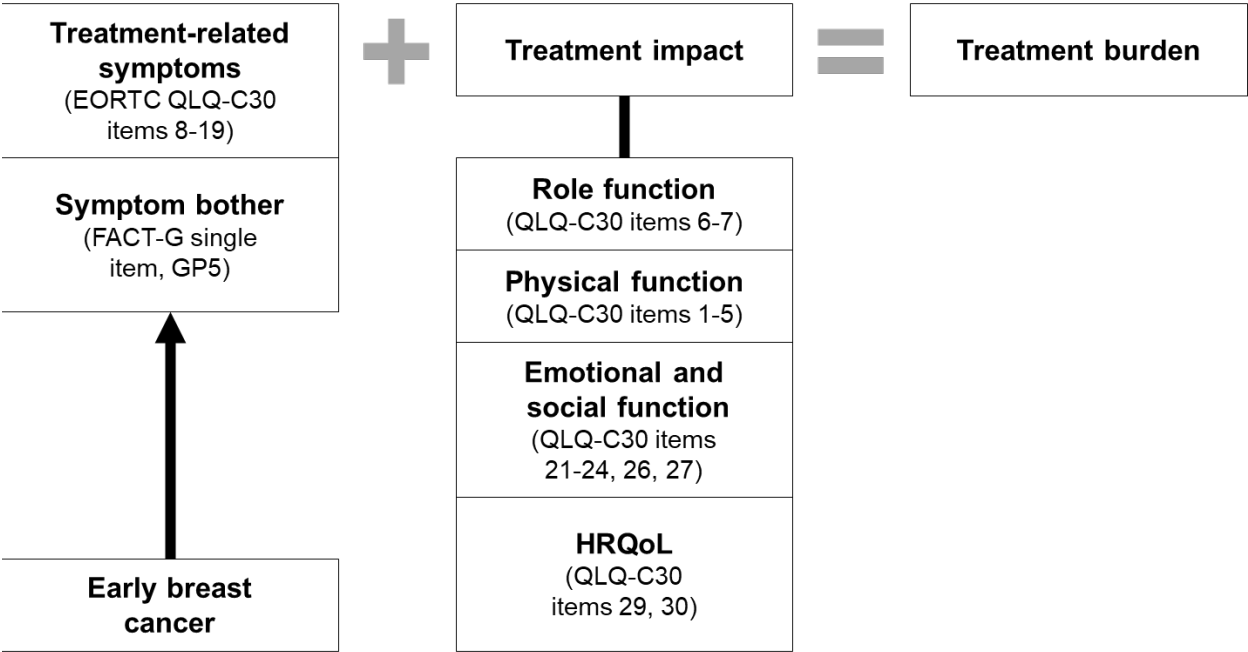
Supplementary Figure 3. Mean values at each time point for (A) fatigue, (B) nausea and vomiting, (C) pain, (D) dyspnea, (E) insomnia, (F) appetite loss, (G) constipation, and (H) diarrhea symptom scales measured using the EORTC QLQ-C30 instrument. Error bars indicate 95% confidence intervals.

BL, baseline; C, cycle.



Supplementary Figure 4. Mean change from baseline values at each time point in (A) pain, (B) dyspnea, (C) insomnia, (D) appetite loss, (E) constipation symptom scales, and (F) social and (G) emotional functioning scales measured using the EORTC QLQ-C30. Error bars indicate 95% confidence intervals.

BL, baseline; C, cycle.



Supplementary Figure 5. The conceptual framework used to document treatment burden in patients with early triple-negative breast cancer. Specific items from the European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire Core 30 (QLQ-C30) were used to assess treatment-related symptoms and the impact of treatment on functioning (role, physical, emotional, and social) and health-related quality of life (HRQoL). Symptom bother was assessed using the Functional Assessment of Cancer Therapy-General (FACT-G) single item GP5 (“I am bothered by side effects of treatment”).

Supplementary Table 1. PRO domains at baseline

PRO measure	Baseline value (95% CI)	
	Atezolizumab-chemotherapy (<i>n</i> = 161)	Placebo-chemotherapy (<i>n</i> = 167)
Physical functioning	90.9 (88.5-93.2)	90.0 (87.8-92.2)
Role functioning	89.4 (86.1-92.8)	88.9 (85.7-92.0)
GHS/QoL	79.2 (76.3-82.1)	76.5 (73.5-79.4)

GHS, global health status; PRO, patient-reported outcome; QoL, quality of life.

Supplementary Table 2. Summary of longitudinal analysis of EORTC QLQ-C30 domains

PRO measure	Treatment visit <i>P</i> value ¹
Physical functioning	0.36
Role functioning	0.77
GHS/QoL	0.50

¹The mixed model for repeated measures across treatment visits from cycle 2 through month 18 of survival follow-up, adjusted for PD-L1 status, AJCC stage, age group, Eastern Cooperative Oncology Group score, treatment, time point, treatment interaction with time point, and baseline measurement interaction with time point.

AJCC, American Joint Committee on Cancer; GHS, global health status; PD-L1, programmed death-ligand 1; PRO, patient-reported outcome; QoL, quality of life.

Supplementary Table 3. Patients selecting each response option of the FACT-G GP5 Item (“I am bothered by side effects of treatment”) at baseline (cycle 2 day 1).

	Atezolizumab-chemotherapy (<i>n</i> = 165)	Placebo-chemotherapy (<i>n</i> = 168)
Responses	156	163
Patients selecting response option, <i>n</i> (%)		
0 (“Not at all”)	30 (19.2)	39 (23.9)
1 (“A little bit”)	72 (46.2)	71 (43.6)
2 (“Somewhat”)	42 (26.9)	37 (22.7)
3 (“Quite a bit”)	9 (5.8)	13 (8.0)
4 (“Very much”)	3 (1.9)	3 (1.8)