# Tolerability Patient-Reported Outcomes in FDA Oncology New Drug Approvals, 2021-2025

PCR54

Ari Gnanasakthy,[1] Bidur Banjara,[1] Rohini Sen[2]

[1] RTI Health Solutions, Durham, NC, United States; [2] AbbVie, Chicago, IL, United States

## BACKGROUND

Treatment tolerability has recently emerged as an important and separate consideration in oncology drug development as highlighted by the Food and Drug Administration (FDA) in its recent Guidance for Industry: Core Patient-Reported Outcomes in Cancer Clinical Trials.

The guidance underscores the importance of assessing patient-reported outcomes (PROs) in evaluating and communicating tolerability of cancer therapies. It recommends single-item measures, such as items from the PRO version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE), and global side-effect impact items, including the Functional Assessment of Cancer Therapy-GP5 single item (FACT-GP5) and the European Organisation for Research and Treatment of Cancer's Quality of Life Questionnaire Item 168 (EORTC Q168).[1]

## OBJECTIVE

To evaluate the inclusion of items from PRO-CTCAE library and global side-effect impact items, including FACT-GP5 and EORTC Q168, in recent FDA oncology regulatory review documents and approved product labeling.

## METHODS

- FDA oncology approvals from 2021 to 2025 were reviewed.
- Public multidiscipline review documents and labels were screened.
- PRO measures related to tolerability were extracted.
- Descriptive analyses summarized frequency, indication, trial design, and label placement.

**FACT-GP5:** "I am bothered by side effects of treatment."

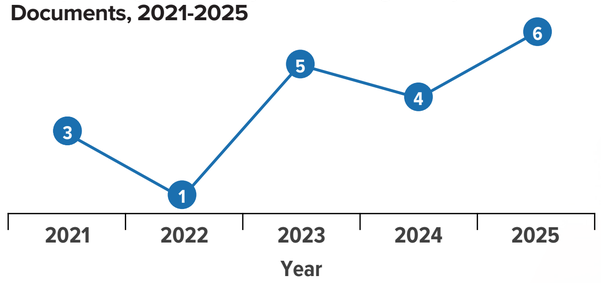
**EORTC Q168:** "To what extent have you been troubled with side effects from your treatment?"

**PGI-TT:** "In the last 7 days, how bothered were you by the side effects of your cancer treatment?"

## RESULTS

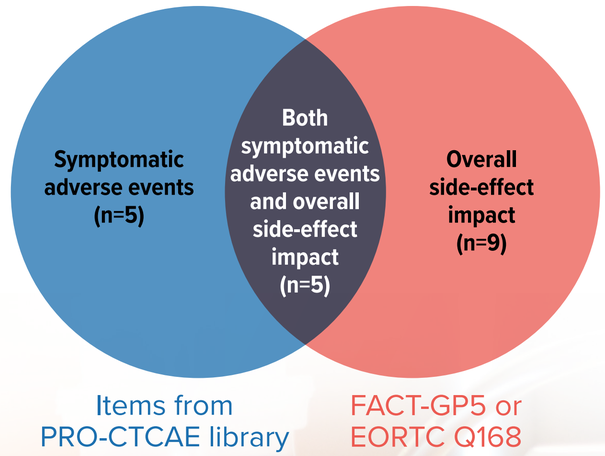
- Of 258 FDA oncology drug approvals screened, 19 (7.4%) review documents included PRO-CTCAE items, FACT-GP5, or EORTC Q168.[2-21]
  - Majority of those approved drugs were for solid tumors (n=16).
- Use of tolerability PROs increased steadily from 3 approvals in 2021 to 6 approvals in 2025, despite some year-to-year variation (Figure 1).

**Figure 1. Number of FDA Oncology Drug Approvals Incorporating Tolerability PROs in Regulatory Review Documents, 2021-2025**



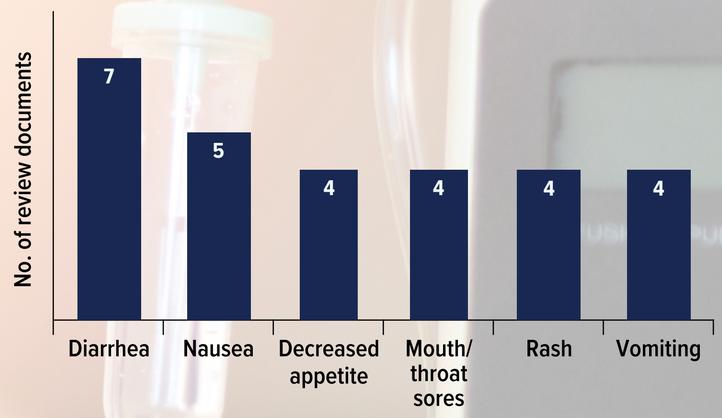

- Tolerability PRO measures used in drug approvals (Figure 2) were:
  - PRO-CTCAE alone: 5 approvals[2,7,8,10,12]
  - FACT-GP5 alone: 9 approvals[4,9,13-17,19,20]
  - Both PRO-CTCAE and FACT-GP5: 4 approvals[5,6,11,18]
  - Both PRO-CTCAE & EORTC Q168: 1 approval[21]
- The number of PRO-CTCAE items in confirmatory trials ranged from 1 to 18.
  - Diarrhea, nausea, appetite loss, mouth/throat sores, rash, and vomiting were the most common PRO-CTCAE items (Figure 3).
- Among 13 of the 19 drug approvals in which the FACT-GP5 was used/inferred:
  - 7 drug approvals explicitly reported using the FACT-GP5 to assess side-effect bother.[4,9,13,14,17,18,20]
  - 2 drug approvals used the Patient Global Impression of Treatment Tolerability (PGI-TT) to assess patients' bother from cancer treatment side effects.[5,6]
  - 1 drug approval referred to FACT-GP5 as Modified Bother Item.[3]
  - 3 drug approvals did not specify the measure but assessed bothersome side effects from treatment, inferring use of FACT-GP5.[11,15,16,19]
- Only 1 drug approval used EORTC Q168 to evaluate overall side-effect impact due to treatment.[21]
- PROs relevant to treatment tolerability were identified in product labeling for 3 approvals:
  - Blenrep (belantamab mafodotin) (2025): PRO-CTCAE blurred vision was referenced in the Adverse Reactions section of the label; severity was higher in the Blenrep arm and supported by worse night-driving scores on the Ocular Surface Disease Index.[2]
  - Itovebi (inavolisib) (2024): PRO-CTCAE items and FACT-GP5 were referenced in the Adverse Reactions section of the label; patient-reported symptoms (e.g., diarrhea, nausea, fatigue, rash) were more pronounced in the inavolisib arm, consistent with clinician-reported safety findings.[3]
  - Retevmo (selpercatinib) (2024): FACT-GP5 was referred to in the Clinical Trials section of the label; patients receiving selpercatinib spent less time experiencing high side-effect bother and had lower treatment discontinuation due to adverse reactions compared with the comparator.[4]

**Figure 2. Tolerability PRO Measures Used in Regulatory Review Documents of FDA Oncology Drug Approvals, 2021-2025**




- Appearance of tolerability PROs in approvals increased over time
- FACT-GP5 was used more often than EORTC Q168
- PRO findings were often supported by safety and discontinuation data

**Figure 3. Most Common PRO-CTCAE Items Appearing in Review Documents of FDA Oncology Drugs Approvals, 2021-2025**




## CONCLUSIONS

- Items from PRO-CTCAE library and FACT-GP5 are increasingly referenced in FDA reviews, reflecting their growing role in evaluating treatment tolerability in cancer clinical trials.
- Data from PRO-CTCAE items and overall side-effect impact (assessed by FACT-GP5 or EORTC Q168) are often supported by clinician-reported safety assessments, other PRO measures, and clinical endpoints, such as treatment discontinuation due to adverse reactions.

### References

1. FDA. 2024. https://www.fda.gov/media/149994/download.
2. Blenrep PI. 2025. https://www.accessdata.fda.gov/drugsatfda_docs/label/2025/761440s000lbl.pdf.
3. Itovebi PI. 2024. https://www.accessdata.fda.gov/drugsatfda_docs/label/2024/219249s001lbl.pdf.
4. Retevmo PI. 2024. https://www.accessdata.fda.gov/drugsatfda_docs/label/2024/218160s004lbl.pdf.
5. FDA. 2023. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2023/218197Orig1s000MultidisciplineR.pdf.
6. FDA. 2025. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2025/761394Orig1s000MultidisciplineR.pdf.
7. FDA. 2023. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2023/217639Orig1s000MultidisciplineR.pdf.
8. FDA. 2023. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2023/761309Orig1s000MultidisciplineR.pdf.
9. FDA. 2024. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2024/217779Orig1s000MultidisciplineR.pdf.
10. FDA. 2025. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2025/218881Orig1s000MultidisciplineR.pdf.
11. FDA. 2024. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2024/219249Orig1s000MultidisciplineR.pdf.
12. FDA. 2021. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2021/215310Orig1s000MultidisciplineR.pdf.
13. FDA. 2023. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2024/216793Orig1s000MultidisciplineR.pdf.
14. FDA. 2022. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2022/761234Orig1s000MultidisciplineR.pdf.
15. FDA. 2023. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2025/208558Orig1s025.pdf.
16. FDA. 2021. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2021/214665Orig1s000MultidisciplineR.pdf.
17. FDA. 2025. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2025/214665Orig1s009.pdf.
18. FDA. 2025. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2025/219839Orig1s000MultidisciplineR.pdf.
19. FDA. 2024. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2024/761344Orig1s000MultidisciplineR.pdf.
20. FDA. 2021. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2021/212904Orig1s000MultidisciplineR.pdf.
21. FDA. 2025. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2025/219042Orig1s000MultidisciplineR.pdf.

Contact: **Bidur Banjara,** Senior Health Research Scientist, RTI Health Solutions. Email: bbanjara@rti.org

**Presented at: ISPOR 2026; 17-20 May 2026; Philadelphia, PA, USA**