

# Navigating Uncertainty: Trends in ICER's evidence ratings

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## Background

- The Institute for Clinical and Economic Review (ICER) is primarily recognized for conducting United States (US) health technology assessments utilizing their value assessment framework, which has evolved over time.<sup>1,2</sup>
- ICER's value assessment framework seeks to inform decisions aimed at achieving access to high-value care for patients with the consideration of long-term value for money and short-term affordability.<sup>2</sup>
- To evaluate the overall strength of evidence for a variety of outcomes in ICER's assessments, the Evidence Rating Matrix™ was developed. A letter grade is assigned to each of the interventions evaluated, reflecting the magnitude of net health benefit and the level of certainty in the best point estimate of net health benefit.<sup>2</sup>
- As of 2024, ICER has conducted assessments evaluating over 400 different drugs for more than 80 medical conditions.<sup>3</sup>

## Objective

- This study analyzed trends in ICER's assigned grades over time (2017–2019 and 2020–2023) and between rare and non-rare diseases.

## Methods

- Evidence rating grades and rare disease status for each assessed intervention (N=420) were collected from ICER's Final Evidence Reports for time frames corresponding to the past two evidence frameworks (2017–2019, n=287; 2020–2023, n=133).
- Therapies were excluded if they were not pharmaceutical interventions, did not have Final Evidence Reports, did not have assigned letter grades, or did not have comparators.
- Therapy grades were categorized into ICER's collapsed evidence ratings (Uncertain, n=169; Comparable, n=128; Superior, n=123) (Table 1) and grouped based on rare vs non-rare disease (rare, n=85; non-rare, n=335).

Table 1. ICER's Collapsed Evidence Ratings<sup>4,5</sup>

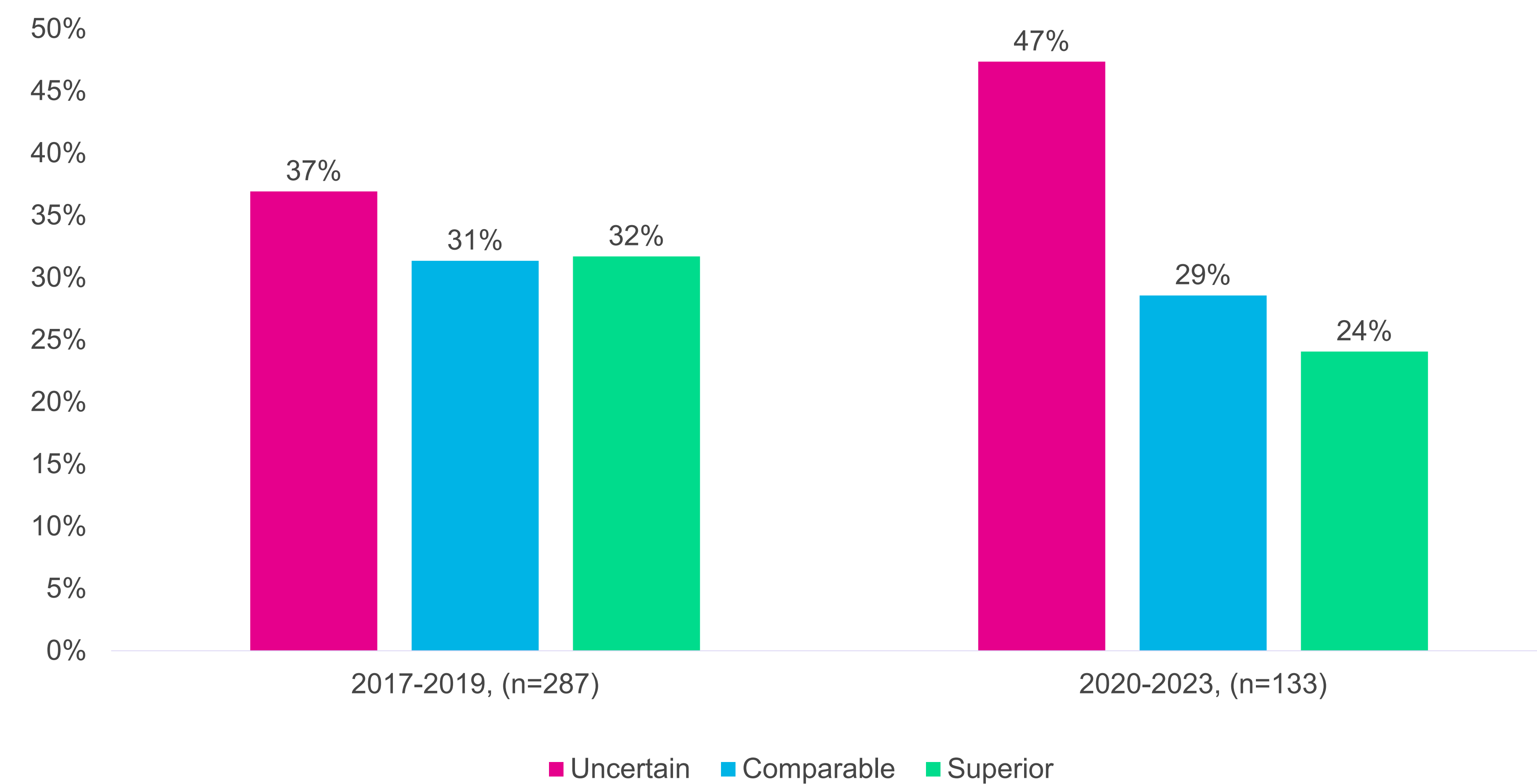
Collapsed Evidence Ratings	Therapy Grades
Superior	A, B, B+
Comparable	C-, C, C+, C++
Uncertain	P/I, I, D

## Results

- For assessments conducted under the 2017–2019 framework, 37% of grades fell into the Uncertain category, 31% were Comparable, and 32% were Superior.
- For those under the 2020–2023 framework, the respective numbers were 47%, 29%, and 24%, representing a shift toward evidence uncertainty (Figure 1).

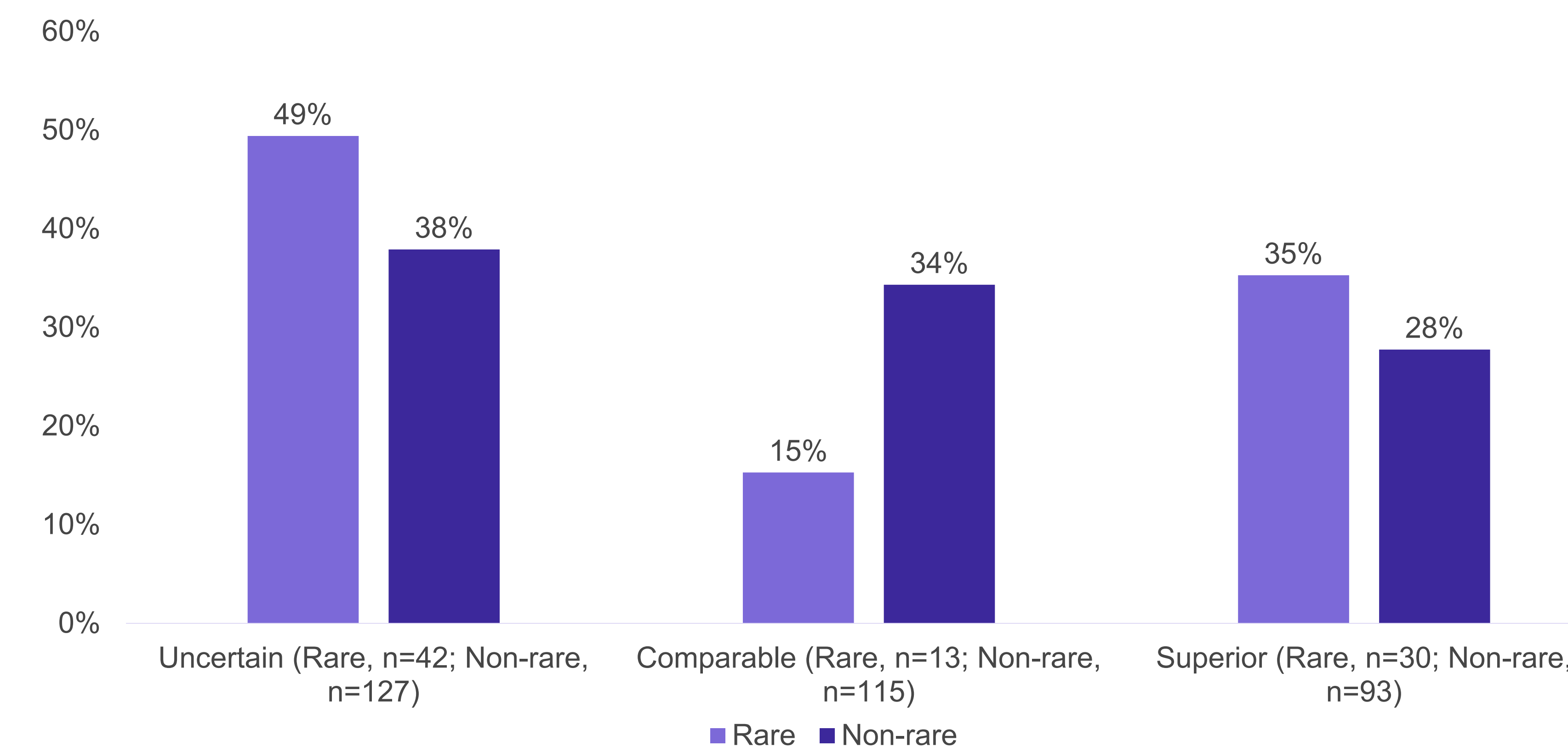
## Results (cont.)

Figure 1. Collapsed Evidence Ratings by Framework (2017–2019 vs 2020–2023)



For rare diseases across both time frames, the respective numbers were 49% (Uncertain grades), 15% (Comparable grades), and 35% (Superior grades); for non-rare diseases, they were 38%, 34%, and 28%, representing greater uncertainty for rare diseases (Figure 2).

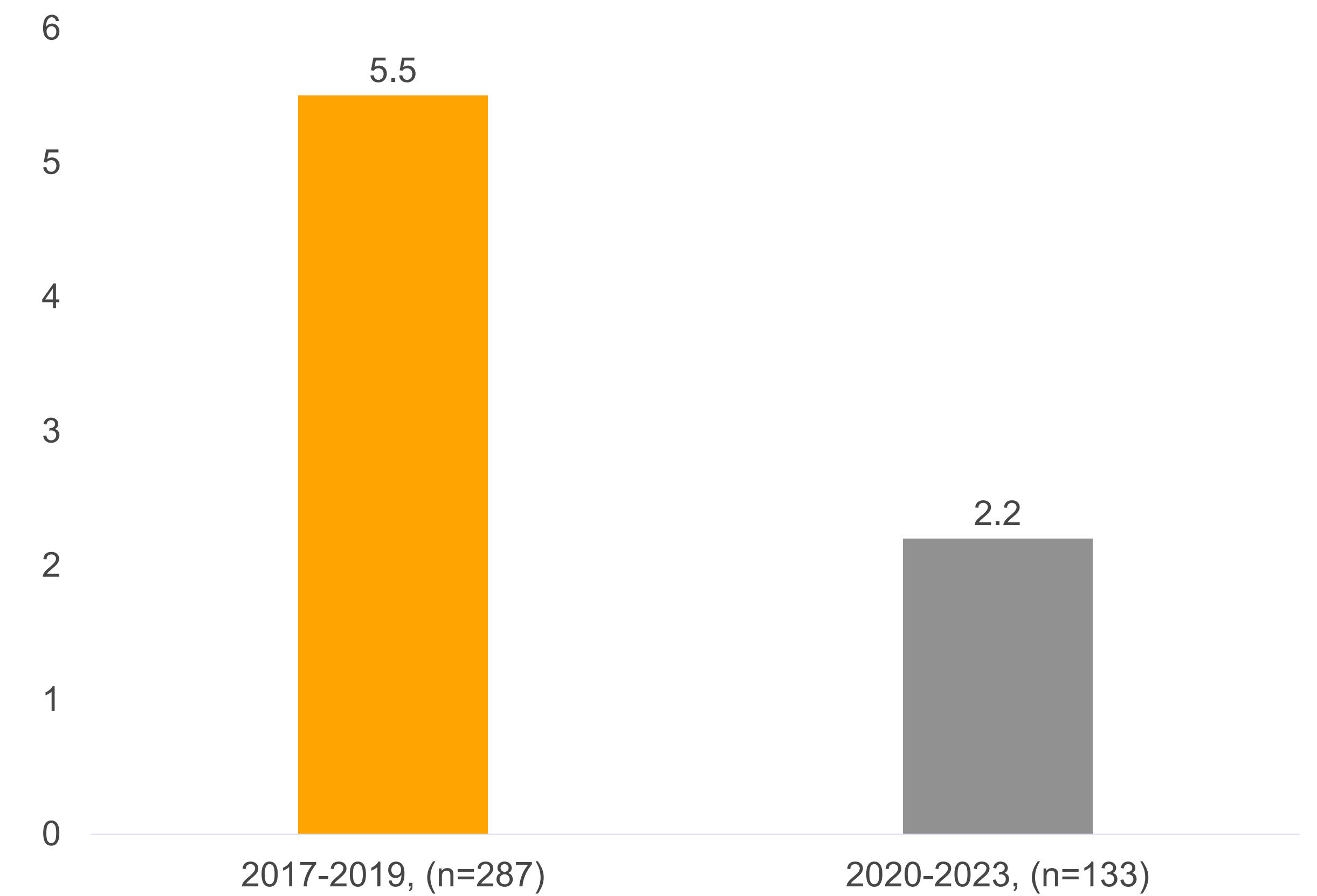
Figure 2. Collapsed Evidence Ratings for Rare vs Non-rare Disease Therapies



Note: Rare disease, n=85; non-rare disease, n=335.

- The number of rare disease interventions graded during the 2017–2019 timeframe (n=44) was comparable to those reported during the 2020–2023 timeframe (n=41), but the number of non-rare disease interventions graded during 2017–2019 (n=243) was notably higher than those graded during the 2020–2023 timeframe (n=92).
- The ratio of non-rare to rare disease interventions graded shifted from 5.5 in 2017–2019 to 2.2 in 2020–2023 (Figure 3).

Figure 3. Ratio of Non-Rare to Rare Disease Interventions by Framework



## Limitations

- This study only included evidence rating grades and rare disease status from ICER's Final Evidence Reports for time frames corresponding to the past 2 frameworks (2017–2019 and 2020–2023). Grades from ICER's first value assessment (2015–2016) or its newly released framework (2024–Present) may alter results.

## Conclusions

- Over time, ICER has increasingly awarded Uncertain grades. This may be due to the relative shift toward assessments for interventions that treat rare diseases, to which ICER tends to assign Uncertain grades more frequently.
- Future research should investigate in greater detail the durability of these trends in the newly released framework.

## Acknowledgements

- The authors would like to acknowledge Vanessa Vega for providing graphical support and Christina Schnell for conducting quality review.

**References:** 1. ICER. Celebrating ICER's Impact Over the Last 15+ Years. ICER. Accessed March 6, 2024 <https://icer.org/who-we-are/history-impact/15-year-anniversary> 2. ICER. 2020–2023 Value Assessment Framework. ICER. Published February 3, 2022. Accessed March 6, 2024. [https://icer.org/wpcontent/uploads/2020/11/ICER\\_2020\\_2023\\_VAF\\_02032022.pdf](https://icer.org/wpcontent/uploads/2020/11/ICER_2020_2023_VAF_02032022.pdf) 3. ICER. Assessments. ICER. Accessed March 19, 2024. <https://icer.org/explore-our-research/assessments> 4. ICER. Evidence Rating Matrix. ICER. Accessed February 6, 2024 <https://icer.org/evidence-rating-matrix> 5. Nair S. Influence of Institute for Clinical and Economic Review (ICER) Reports in Formulary Decision Making. Poster presented at: ISPOR 2023; May 7-10, 2023; Boston, MA, USA.

