

# Retrospective Analysis of a Pharmacist-Led Dose Rounding Initiative at an Outpatient Oncology Practice

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## Background

- Costs associated with cancer diagnoses continue to represent the highest healthcare expenditure in the United States. On average, a diagnosis of cancer will cost roughly four times that of a diagnosis not related to cancer.<sup>1</sup>
- Due to anticipated population increases, the cost of cancer care is expected to reach more than \$346 billion by 2030.<sup>2</sup>
- Pharmacist-led dose rounding initiatives present a cost-savings opportunity by decreasing the amount of waste generated by single dose vials while maintaining therapeutic safety and effectiveness.
- In 2018, the Hematology/Oncology Pharmacy Association (HOPA) released a position statement offering recommendations for implementing a dose rounding protocol at oncology practices.<sup>3</sup>
- Kristie Fox, PharmD presented a poster at the 2021 NCODA Fall Summit highlighting the initial cost savings incurred upon implementation of a dose rounding protocol.<sup>4</sup>

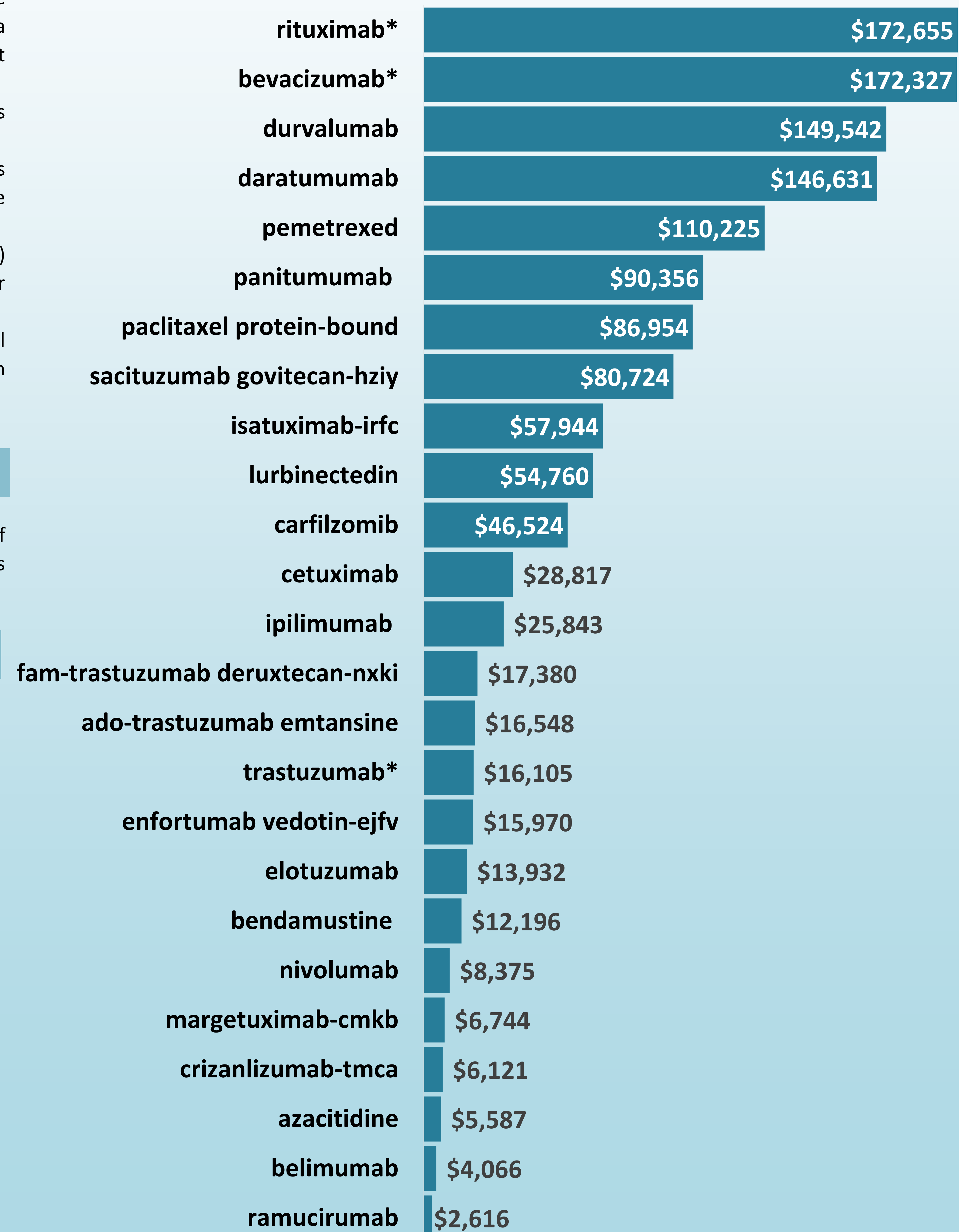
## Objectives

The purpose of this initiative is to highlight the continued benefits of implementing a dose rounding protocol for costly infusion medications in an independent outpatient oncology practice.

## Methods

- In June 2021, Cancer Specialists of North Florida (CSNF) implemented a dose rounding protocol that established the clinical pharmacist's role in rounding single dose vials to the nearest vial size within 10%.
- Costly monoclonal antibodies and cytotoxic medications were identified and phased into the protocol.
  - Phase 1: pemetrexed, nivolumab, bevacizumab\*
  - Phase 2: trastuzumab\*, daratumumab, isatuximab-irfc
  - Phase 3: cetuximab, panitumumab, bendamustine
  - Phase 4: rituximab\*, IVIG
  - Phase 5: carfilzomib, bortezomib, fam-trastuzumab deruxtecan-nxki, sacituzumab-hziy, polatuzumab vedotin-piiq, elotuzumab
  - Phase 6: brentuximab, ipilimumab, paclitaxel protein-bound, belantamab mafodotin-blmf, cabazitaxel, azacitidine
- Eligible doses are identified in OncoEMR using a report to determine the upcoming week's scheduled orders.
- As new drugs come to market, they are evaluated for appropriateness in dose rounding and doses are adjusted accordingly by a clinical pharmacist.

## Dose Rounding Saved CSNF ~\$1.35 Million (June 14, 2021 Through September 30, 2022)



## Results

- Cost savings were determined based on the wholesale acquisition cost (WAC).
- Only doses that were rounded by a clinical pharmacist per the protocol were included in this analysis.
- Between June 14, 2021 and December 31, 2021, 1407 doses of the approved medications were rounded to the nearest vial size resulting in a total savings of \$460,955.
- Between January 1, 2022 and September 30, 2022, 2284 doses of the approved medications were rounded to the nearest vial size resulting in a total savings of \$889,105.
- On average, rounding saved \$365.75 per dose.
- Rounded doses of rituximab\* and bevacizumab\* resulted in the highest cost savings (\$172,655 and \$172,327, respectively).

## Conclusions

Since the initiation of a dose rounding protocol, pharmacists have saved a total of \$1,350,060 at CSNF. These results demonstrate the effectiveness of dose rounding costly monoclonal antibodies and cytotoxic medications on the overall healthcare costs associated with cancer care. In an effort to continue to drive down healthcare costs, clinical pharmacists at CSNF will continue to monitor the drug market for potential dose rounding cost savings opportunities.

## References

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- Fahrenbruch R, Kintzel P, Bott AM, et al. Dose Rounding of Biologic and Cytotoxic Anticancer Agents: A Position Statement of the Hematology/Oncology Pharmacy Association. *J Oncol Pract*. 2018 Mar;14(3):e130-e136. doi: 10.1200/JOP.2017.025411.
- Kristie Fox, Dose Rounding Initiative at Cancer Specialists of North Florida, 2021 NCODA Fall Summit, October 28, 2021, Scottsdale, Arizona.

\*including biosimilars