



# The Cost of Cancer and the Role of the Oncology Pharmacist

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## Disclosures

- I have no financial or relevant disclosures in regards to this presentation.



## Objectives

- Describe the benefits and barriers of utilizing a dose-rounding policy for chemotherapy/biotherapy.
- Discuss payments options for high-cost drugs and their implication on the role of the oncology pharmacist.




## Background

- Spending on cancer medicine 2017
  - Global \$133 billion
  - United States \$49.8 billion
    - Doubled since 2012
    - 2/3<sup>rd</sup> of growth was from drugs approved in the past 5 years





## Background

Cytotoxic Chemotherapy	Immunotherapy/Targeted Therapy				
nab-paclitaxel	bevacizumab	ramucirumab	binatumomab	atezolizumab	inotuzumab ozogamicin
daunorubicin liposomal	pomalidomide	siltuximab	lenvatinib	venetoclax	tisagenlecleucel
eribulin	erlotinib	ceritinib	gefitinib	ofatumumab	durvalumab
daunorubicin-cytarabine liposome	ipilimumab	daratumumab	cabozantinib	obinutuzumab	gemtuzumab ozogamicin
irinotecan liposome	dabrafenib	idelalisib	sonidegib	raxolitinib	enasidenib
tipiracil/trifluridine	trametinib	olaparib	carfilzomib	patibociclib	regorafenib
trabectedin	lenalidomide	ado-trastuzumab	perituzumab	belinostat	brigatinib
afatinib	nivolumab	pembrolizumab	osimertinib	midostaurin	
ibrutinib	dinutuximab	sorafenib	niraparib	acalabrutinib	
crizotinib	brentuximab vedotin	ribociclib	avelumab	axicabtagene ciloleucel	
aleciclinib	elotuzumab	nectumumab	cobimetinib	abemaciclib	
olaratumab	panobinostat	rucaparib	enasidenib	copanlisib	
trastuzumab-dkst	bevacizumab-awwb	neratinib	lutetium Lu 177 dotatate	ado-trastuzumab	
neratinib	talmogene laherparepvec	ra 223 dichloride	ixazomib	ivosidenib	
encorafenib	binimetinib	mogamulizumab-kpkc	moxetumomab pasudotox-tfkl	duvelisib	



## Background

- 2018: 40 new drug approvals or new indications by the FDA
  - Increased growth of targeted agents and use of biomarkers
- Median annual cost of newly approved therapy in 2017 = \$150,000
  - Median annual cost in 2013 = \$79,000
- Continued advancements are expected to continue to drive growth and increase costs



J Oncol Pharm Pract. 2017;23(5):379-383.  
J Oncol Pharm Pract. 2015;21(5):285-84.  
Support Care Cancer. 2004;12:653-56.

## Cost Savings Initiatives

- **Dose-Rounding Policies:** various versions have been reported in the literature
  - **Cytotoxic and/or biotherapy**
    - All-inclusive or specific agents
  - **Rounding prescribed dose +/- 5 – 10%**
    - To nearest vial size
    - To nearest dosing increment
    - Based on intent of chemotherapy
  - **Exemptions:** research medications, pharmacokinetically determined doses

**TOPA**

J Oncol Pharm Pract. 2017;23(5):379-383

## Dose-Rounding Policy

Benefits	Barriers
<ul style="list-style-type: none"> <li>• <b>Cost savings</b> <ul style="list-style-type: none"> <li>▫ <b>Estimated \$40,000 - \$200,000+</b></li> </ul> </li> <li>• Medication safety</li> <li>• Reduction in drug waste</li> </ul>	<ul style="list-style-type: none"> <li>• Time constraints based on work load</li> <li>• Complicated policies</li> <li>• Hesitancy to implement such policies</li> <li>• Theoretical harm of increased toxicity and decreased efficacy</li> </ul>

Requires analysis of institution and creation of individualized policy to have most benefit

**TOPA**

Gynecologic Oncology. 2018;150:3-6.  
Heming et al. Addressing risk of financial toxicity in an ambulatory oncology practice: the institutional experience with the ASCO Quality Training Program. Poster presentation, ASCO Quality Care Symposium, Orlando, FL, March 3-4, 2017.

## Financial toxicity

- Patient-level impact of cost and its potential side effect just like any other “toxicity” that can result from treatment
  - Cancer patients have 2.5 times higher risk of filing bankruptcy
  - Can have negative impact on adherence
- NorthShore University Health System addressed financial toxicity (FTOX) at patient education during informed consent
  - Information increased about risk of FTOX 0% - 53%
  - Obtained prior authorization prior to therapy 50% - 94%

**TOPA**

The Official U.S. Government Site for Medicare. <https://www.medicare.gov/> Accessed August 17, 2018.  
Am J Health-Syst Pharm. 2015; 72:2195-5

## Payment for High Cost Drugs

- **Prescription coverage**
  - Tiered formulary of medication
  - Deferment of specific medications to specialty pharmacy
- **Medicare Coverage**
  - Part B – outpatient chemotherapy administration and some oral chemotherapy agents, anti-emetics, ESA's
  - Part D – majority oral chemotherapy agents

**TOPA**

The Official U.S. Government Site for Medicare. <https://www.medicare.gov/> Accessed August 17, 2018.  
BMS Oncology Co-Pay Assistance Program. <http://www.bms.com/assessments/assistance/medicare/medicare-co-pay-assistance-program> Accessed August 17, 2018.  
Novartis Financial Assistance. <http://www.patientfinancialassistance.com/financial-assistance/financial-assistance> Accessed August 17, 2018.

## Payment for High Cost Drugs

- **Manufacturer Co-Pay Cards**
  - Allows payment secondary to a private insurance company
  - **NOT** eligible with federal insurance options
    - Medicare, Medicaid, TriCare, Veterans Affairs, Department of Defense, Medigap, CHAMPUS
  - **BMS:** maximum \$25,000 per drug per year
    - \$25 co-pay per dose
  - **Novartis:** maximum \$15,000 per year
    - No more than \$25 per month
  - Requires additional financial paperwork for assessment of eligibility

**TOPA**

Am J Health-Syst Pharm. 2015; 72:2195-5.  
342B FAQs. Health Resources & Services Administration. July 2018. <https://www.hrsa.gov/342b-faqs> Accessed August 19, 2018.  
Medicare 340B Program Billing 340B Modifiers under the Hospital Outpatient Prospective Payment System (OPPS). <https://www.cms.gov/Medicare/Medicare-IPPS-for-Service-Providers/OPPS-outpatient-prospective-payment-system/340B-Modifiers-under-Medicare-OPPS.pdf> Accessed August 19, 2018.

## Payment for High Cost Drugs

- **340B Program**
  - Allows for covered entities to purchase outpatient drugs at reduced prices from manufacturers
  - Changes to Medicare re-imbursement January 2018
- **Affordable Care Act**
  - Shift towards **quality-based care**

**TOPA**

<https://www.medicare.gov/innovation-your-health/coordinates-your-care/ocm-model.html>  
Centers for Medicare & Medicaid Services. Oncology Care Model (OCM) Request for Applications (RFAs).  
 Centers for Medicare & Medicaid Services. Oncology Care Model (OCM) Request for Applications (RFAs).  
 https://innovation.cms.gov/News/ocmrfa.pdf. Accessed August 15, 2018.

## Cost Savings Initiatives

- **Center for Medicare & Medicaid Innovation (CMMI) and the Oncology Care Model (OCM)**
  - Improve health outcomes for patient with cancer, improve **quality of cancer care**, and **reduce spending for cancer treatment**
    - 24/7 access to oncology care for patients
    - Effective use of electronic medical record
    - Continuous quality improvement
    - Patient navigation
    - Comprehensive care plans
    - Treatment according to evidence-based, national guidelines

Centers for Medicare & Medicaid Services. Oncology Care Model (OCM) Request for Applications (RFAs).  
 https://innovation.cms.gov/News/ocmrfa.pdf. Accessed August 15, 2018.  
 Oncology Care Model. Center for Medicare & Medicaid Services. <https://innovation.cms.gov/News/ocmrfa.pdf>.  
OCM. Accessed September 2018.

## Oncology Care Model

- Focusing on incentives to improve quality of care
- Provides enhanced services for *patients undergoing chemotherapy treatment in 6-month episodes*
- **Payment**
  - **Monthly per-beneficiary-per-month (PBPM) payment for the duration of the episode of care**
    - \$160 payment per month per beneficiary
  - **Performance-based payment for associated episodes of cancer care**
    - Retrospective payments based on Medicare's historical expenditures and achievement of quality measures

American Society of Clinical Oncology Position Statement on Addressing the Affordability of Cancer Drugs. *J Clin Oncol*. 2018;36(13):187-92.

## Cost Savings Initiatives

- **American Society of Clinical Oncology (ASCO) Value Framework**
  - **Clinical efficacy endpoints**
  - **Outcome-based pricing determining drug reimbursement**
    - Patient survival beyond median survival in clinical trial provided with higher reimbursement

NCIN Clinical Practice Guidelines in Oncology (NCCN Guidelines) with NCCN Evidence Blocks. <https://www.nccn.org/webroot/clin/default.aspx>. Accessed August 29, 2018.

## Cost Savings Initiatives

- **National Comprehensive Cancer Networks Evidence Blocks**
  - Integrates efficacy, safety, quality and quantity of evidence, consistency of evidence, and affordability

NCCN EVIDENCE BLOCKS CATEGORIES AND DEFINITIONS			
Category	Definition	Example Evidence Block	Score
1	Highly effective. Low toxicity and other promising long-term survival advantage.	1	4
2	Very effective. Low toxicity and sometimes provides long-term survival advantage.	2	3
3	Modestly effective. Modest impact on survival, but often improves quality of life or addresses impact on survival, but secondary outcome not statistically significant.	3	2
4	Palliative. Provides symptomatic benefit only.	4	1
5	Highly consistent. Multiple trials with similar outcomes.	5	4
6	Strongly consistent. Multiple trials with some consistency, consistent outcomes.	6	3
7	May be consistent. Few trials or only trials with low patient numbers, inconsistent outcomes or only with some consistency in outcomes.	7	2
8	Inconsistent. Multiple trials with inconsistent outcomes.	8	1
9	Insufficient evidence. Limited or no data available to support a recommendation.	9	0
10	Not applicable. Evidence not relevant to the clinical question.	10	0

*J Clin Oncol*. 2018;36(13):144-46.  
*J Clin Oncol*. 2018;36(13):193-200.  
*J Clin Oncol*. 2016;34(12):2614.

## Future Directions

- **Oncology Clinical Pathway (OCP):** cancer treatment plan used by oncologists and surgeons that includes procedures, tasks, interventions, and treatment regimens (not limited to chemotherapy)
- **ASCO Statement Regarding OCP**
  - Recognizing the value an approach to reducing costs
  - Emphasizes the importance of providing ease of use
  - Pathways should support the best and most current evidence
  - Acknowledging that 100% compliance is not possible

**TOPA**

*J Clin Oncol*. 2018;36(13):144-46.  
*J Clin Oncol*. 2018;36(13):193-200.  
*J Clin Oncol*. 2016;34(12):2614.  
*J Clin Oncol*. 2016;34(12):12-18.

## Future Directions

- ASCO assessed 4 Vendors in early 2018
  - **Via Oncology, Value Pathways, Anthem/AIMS Cancer Care Quality Program, New Century Health**
  - Limited data still exists with cost-savings impact but shows evolving steps to understand this process
  - Non-small cell lung cancer patients – improvement in saving ~\$9000 treatment on-pathway but didn't show improvement in overall survival

**TOPA**

Cytoregic Oncology 2018.150-3-6.

## Role of an Oncology Pharmacist

- Addressing supportive care medications
  - Large impact on overall spending
  - Generic versus brand options
- Financial toxicity discussions included within chemotherapy education
  - NCCN Distress Thermometer and Problem List
  - Behavioral Risk Factor Survey
  - Comprehensive Cost for Financial Toxicity

TOPA

CancerCare Sources of Financial Assistance: <https://www.cancer.org/publications/sources-of-financial-assistance>. Accessed August 15, 2018.  
Pharmacy Discount Coupons: Prescription Medications: <https://www.cancer.com/pressroom/2018/08/08/080818-pharmacy-discount-coupons>. Accessed August 17, 2018.

## Role of an Oncology Pharmacist

- Continuation of institutional dose rounding policies
  - Assessment for areas of improvement
  - Addressing pharmacist's involvement in P&T committees and restricted formularies
- Cost-saving resources
  - [RXPharmacy Coupons](#)
  - [CancerCare Sources of Financial Assistance](#)
- Collaboration between oncology pharmacists focusing on multiple areas and strengths
  - Specialty pharmacy, clinical pharmacists, staff pharmacists, technicians, retail pharmacist

## Conclusions

- Higher costs of therapy will continue with new drug approvals
- Additional places for pharmacy impact will continue to be present
- Patients should not suffer from financial harm to receive the therapy they need

TOPA

## Audience Assessment Question

1. Which of the following best describes a benefit to the utilization of a dose-rounding policy?
  - a) Time constraint during a busy shift in the chemo pharmacy
  - b) Cost-savings for the institution
  - c) Complicated policy with nuisances for individual drugs
  - d) Dose-rounding is only useful in cytotoxic agents

## Audience Assessment Question

2. As the median annual cost of cancer treatment has continued to grow, which adverse effect of cancer treatment listed below should be emphasized during education of cancer options?
  - a) Financial toxicity
  - b) Myelosuppression
  - c) Immune-mediated hepatitis
  - d) Nausea

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