

## Methods for Drug Price Calculations

Estimated monthly prices for chemotherapy drugs are based on the allowable Medicare charge, and calculated according to a methodology used by Dr. Peter B. Bach, Director of the Center for Health Policy and Outcomes at MSKCC, in a previously published paper on cancer drug prices.(1) Since 2005 Medicare has reimbursed at 106% of the average sales price (ASP) for Part B drugs. ASPs are reported in quarterly files released by CMS.(2) For Part D drugs, current prices are retrieved from Medicare's publicly available web-based "PlanFinder" tool.(3) The price we report for these drugs is the "Full Cost of Drug" as reported in the PlanFinder for the Humana PDP Enhanced plan, for a beneficiary living within ZIP code 10021. Payment limits for prior years vary and are described briefly in the table below and in more detail within the previously mentioned article.(1)

In all cases, the relevant payment limit is applied to a 12 week dosing regimen for an "average" adult weighing 70kg, or with a body area of 1.7 meters squared, and divided by 2.77 to arrive at a monthly price (there are, on average, 2.77 months in 12 weeks). The 12 week dosing regimen is retrieved from the FDA approved label for the drug, these labels are available via the FDA's "Drugs@FDA" database.(4) The lowest total dosing regimen within the first FDA approved indication for the drug is used in all cases. The prices shown are for the listed drug only, costs for supportive care or administration fees are not included.

**Table:** Medicare reimbursement rule used to determine drug price

<b>Year of Approval</b>	<b>Method for determining Medicare price<sup>a</sup></b>
<b>Part B physician administered and covered oral drugs</b>	
prior to 1997	100% of the Average Wholesale Price at the time of approval
1997 – 2003	95% of the Average Wholesale Price at the time of approval
2004	85% of the Average Wholesale Price at the time of approval
2005 – current	106% of the Average Sales Price at the time of approval <sup>2, b, c, d</sup>
<b>Part D oral drugs</b>	
prior to 2006	Follows method above for Part B drugs
2006 or later	"Full Cost of Drug" as reported in the PlanFinder for the Humana PDP Enhanced for a beneficiary living within ZIP code 10065 (www.medicare.gov)

<sup>a</sup> All prices are at the time of FDA approval *except* for Jakafi, (a part D drug approved in November of 2011) for which a current price as of October 2014 is listed.

<sup>b</sup> If a drug's ASP is not available Medicare calculates the payment limit as 95% of the Average Wholesale Price (AWP). The AWP's were found using Thomson Healthcare's Red Book. (5)

<sup>c</sup> ASP/AWP for Synribo (a part B drug approved in October 2012) and Xofigo (a part B drug approved in May of 2013), and PlanFinder listings for Gilotrif (a part D drug approved in July 2013), Lenvima (a part D drug approved in February 2015), Tagrisso (a part D drug approved in November 2015), and Ninlaro (a part D drug approved in

November 2015) were not available. Estimated monthly prices reported in the media at the time of drug approval were used for these drugs.

<sup>d</sup> The reduction in reimbursement due to the 2013 'sequester', which lowered reimbursement to ASP+4.2%, is not included in these calculations

## References

1. Bach PB. Limits on Medicare's ability to control rising spending on cancer drugs. *The New England journal of medicine*. 2009;360(6):626-33.
2. Center for Medicare and Medicaid Services. Medicare Part B Drug Average Sales Price. Manufacturer reporting of Average Sales Price (ASP) data [10/18/13]. Available from: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugAvgSalesPrice/index.html>. .
3. Center for Medicare and Medicaid Services. Medicare Plan Finder [10/18/13]. Available from: <https://www.medicare.gov/find-a-plan/questions/home.aspx>.
4. Food and Drug Administration. Drugs@FDA: FDA Approved Drug Products [10/18/13]. Available from: <http://www.accessdata.fda.gov/scripts/cder/drugsatfda/index.cfm>.
5. Thomson Healthcare. Red book: Pharmacy's fundamental reference: Thomson Reuters; 2010. Available from: <http://micromedex.com/products/product-suites/clinical-knowledge/redbook>.