

## Study on price and affordability of Bevacizumab (a Monoclonal Antibody)

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### Abstract

Bevacizumab is a drug of choice for colorectal cancer. Very often, the anticancer drugs are reported to be sold at very high price and are not affordable. The drug is not under Drug price Control order. The present study intends to generate evidence on price movement and affordability of Bevacizumab. The data related to the price of Bevacizumab has been collected from authentic sources and affordability is measured based on the earning of the lowest paid unskilled worker. The current price of single dose is 1,62,843. The study on the price movement of Bevacizumab shows an increase of 37% in price from 2008 to 2017. The study on affordability of Bevacizumab shows that it requires 465 days wages of an unskilled daily wager to afford a single dose. Bevacizumab a first line drug for colorectal cancer and a lifesaving drug, recognising the importance of this drug WHO has added this drug in its EML. But its price is not capped under DPCO. Hence the price is high and beyond the affordability of the common man. Among the various brands of the drug, there has been wide variation despite of the availability of biosimilars.

**Keywords:** Biosimilar, Affordability, Price movement, Regulation

### Introduction

Colorectal cancer is the third most common cancer in the world and fourth most common cause of death. It accounts for over 9% of all cancer incidences. A Biosimilar is a biological product that is highly similar to an already regulatory approved biological product, notwithstanding minor differences in clinically inactive components, and for which there are no clinically meaningful differences between the biosimilar and the approved biological product in terms of safety, purity and potency. Bevacizumab in combination with 5-Fluorouracil chemo-

therapy is the standard first line treatment option for metastatic colorectal cancer.

### Background

Bevacizumab has been shown to improve the overall survival and progression free survival as a first line treatment option. But being a lifesaving drug the price of Bevacizumab is not capped under DPCO which made it costly and not affordable.

### Objective

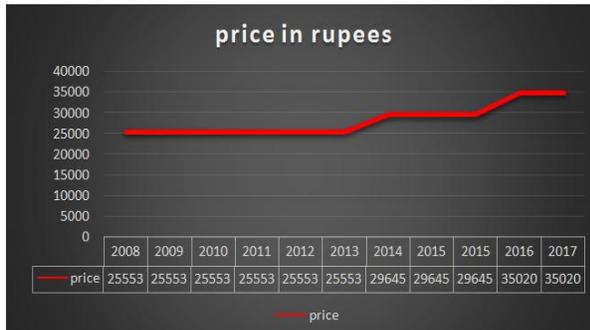
The objective of this study is to assess the price and affordability of Bevacizumab.

**Materials and methods**

The data related to the cost of Bevacizumab has been collected from CIMS. The cost of single dose of Bevacizumab is calculated considering the lowest price in the market. The data related to the dose of the drug is taken from published clinical trials. Affordability is measured based on the earning of the lowest paid unskilled worker.

**Results**

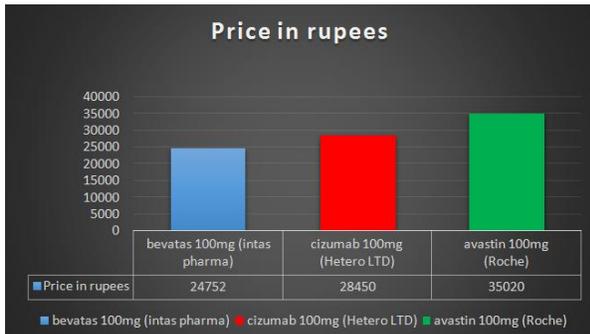
**The price movement of Bevacizumab (Avastin 100mg) from 2008 to 2017 in Indian market.**



**Figure 1: Showing price movement of Avastin from 2008 to 2017.**

From figure 1 we can see a 37% rise in drug price from 2008 to 2017. The price of this drug is not capped by DPCO this might be the one of the reason for raise of price.

**Prices of various brands of Bevacizumab**



**Figure 2: Showing variation of price among different brands.**

From figure 2 we can see a wide variation of price among different brands. Since the drug

is not being regulated it led to wide variation in price.

**Affordability of Bevacizumab**

**Table 1: Showing affordability of Bevacizumab.**

Description	Units in Rupees
Cost of single dose of Bevacizumab for colorectal cancer (7.5 mg/kg)	1,62,843
Daily wage of an unskilled labour	350

From table 1 we can calculate that it takes nearly 465 days for an unskilled daily wagger to buy a single dose of Bevacizumab.

**Conclusion**

Recognising the importance of Bevacizumab WHO has added this drug in its EML. But in India price of this drug is not capped under DPCO which led to rise in price eventually. Hence the price is high and beyond the affordability of the common man. Among the various brands of the drug, there has been wide variation despite of the availability of biosimilars. So, government of India should take effective measure to bring price of these lifesaving drugs under control.

**References**

1. CIMS 2008 to 2016.
2. Cunningham D et al. Lancet Oncol. 2013 Oct;14(11):1077-85.
3. Fatima A. Hagggar, et al. Colorectal Cancer Epidemiology: Incidence, Mortality, Survival, and Risk Factors.
4. Labour.gov.in.
5. [www.1mg.com/generics/bevacizumab-209448?q=bevacizuma](http://www.1mg.com/generics/bevacizumab-209448?q=bevacizuma).