



## Impact of innovative treatments on economic burden of hepatocellular carcinoma at low middle- income countries

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### Abstract

**Background:** At low middle-income countries like Egypt with prevalence of (HCV) which represent from 5 to 7% of total population. Hepatocellular carcinoma is one of major complications of HCV infection At Africa for example Egypt is accounting for approximately half of the data related to HCC. Over the last two decades, a substantial increase (from 4.0% to 7.2%) in the proportion of chronic liver disease Egyptian patients with HCC was observed. This percentage raise some questions like • How government afford innovative products for high number of patients? • Are these innovative products worthy for reimbursement? • What is the impact on budget? The main objective behind conducting this study was to conduct an economic evaluation of Sorafenib for the treatment of hepatocellular carcinoma in the Egyptian patients, compared to standard of care perspective of the National Fund over a time horizon of 4 years. To maximize health gain for the patients while ensuring the most efficient use of the finite resources available to the Egyptian Ministry of Health. **Methods:** A cost-effectiveness analysis from the payer perspective using Markov chain simulation model which is hypothetical cohort model to conforms to real practice of management of advanced HCC in Egypt. Four years' time horizon was selected to reflect the consequences of a decision. Transition probabilities from "first line until progression" state to "best supportive care" and "death" were derived from previously published studies; the SHARP study. **Health outcomes:** The outcome of the two treatment arms was measured by quality-adjusted life years (QALYs). Quality of life data were incorporated in the model to make adjusted results. Quality of life was calculated using utility score was derived from DA Cameron (2008). **Study Costs** used were the local ones according to the national fund list. Discounting was applied at 3.5% annually. The results obtained were in term of ICER and number of QALYs. **Uncertainty Analyses:** To test the stability of our results to variation in the estimates of the input model parameters, we performed various one-dimensional sensitivity analyses. Time horizon was estimated as 4 years **Results:** After three years, Total costs, QALY and ICER are shown in the following table. During the four-year time horizon, Sorafenib is cost-effective at a willing to pay (WTP) threshold of 3 GDP per capita. **Conclusions:** The results conclude that Sorafenib is costeffective which lead to maximizing the health gain obtained from using Sorafenib strategy with minimal impact on resources

### Biography

Abdalla Abotaleb is one of the most profound experts in healthcare policy and regulations in the MENA region His expertise extend from HTA & Reimbursement policies to regulatory and supply chain strategies in the public sector. He has been involved in the fields of health economics, outcomes research, Health policy reforming and reimbursement polices within the healthcare industry for 15 years, with experience across the pharmaceutical, biologicals and vaccines. And now works for WHO as a project manager at health care reforming area. He, in addition to being a committee member and project manager in a number of national projects in many countries including Germany, United Kingdom, Egypt, Algeria, Sudan, Russia, UAE, Morocco, Jordan, Iraq, Turkey, KSA, GULF, USA and Poland, He is a very active researcher with tens of publication across different well recognized organizing including ISPOR, ESMO, ASCO, ECCO, iHEA. HTAI and EuHEA

Treatment strategy	Total cost	Total quality adjusted lifeyears (QALYs)	Incremental Cost Effectiveness Ratio (ICER)
Sorafenib	159,742 EGP	2.65	14,368 EGP/ QALY
Standard of care	151,261 EGP	2.06	
Difference	8,481 EGP	0.59	

### Publications

1. Abdalla Abotaleb (2020) Health systems response to COVID -19 pandemicity at Law & middle income countries . Policy analysis, Conference: Infectious Diseases-Corona Virus, August 2020
2. Abdalla Abotaleb (2020) Impact of COVID -19 on Cardiology practice at MENA regions Analysis & Recommendations, Conference: MENA Cardiology Forum, July 2020
3. Abdalla Abotaleb (2020) Analysis Reimbursement & Public Spending Polices for Immunological Diseases at Law and Middle Income

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