



# LETTER TO THE EDITOR: THE ECONOMIC FACE TO PHARMACOGENOMIC MARKER IN CANCER THERAPY

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It is well known that Pharmacogenomics (PG) tests, performed before antineoplastic treatment (AT), lower overall medical costs and provide higher quality of life and longer life expectancy<sup>1</sup>.

Recent progresses have provided exceptional opportunities to identify prognostic and predictive markers of efficacy of AT. Genetic markers can be used to identify patients who will benefit from therapy, exclude patients at high risk to develop severe toxicity, and adjust dosing<sup>2</sup>.

Furthermore, trials evaluating the pharmacoeconomic impact of genotyping testing in cancer therapy is still low. Furthermore, the major issues to consider for the clinical laboratories (who are responsible for providing pharmacogenomics services), are: i) the availability of FDA-cleared guidelines; ii) the current absence of public reimbursement; iii) the need for genotyping accuracy; and iv) the need to find clinical expertise to interpret laboratory data results<sup>3</sup>. However, there exist a chronic inadequate known in of education of both the physicians regarding PGs test. The current knowledge of healthcare professionals regarding PGs is still low, and school curricula are only slowly including teaching of this subject in their courses. PG knowledge is rapidly developing and changing, and it is imperative that healthcare professionals keep abreast of the advances and clinical indications<sup>4</sup>.

Moreover PGs testing may support clinicians to identify patients who are less likely to benefit from expensive drugs, who are susceptible to severe treatment related toxicities at standard doses, and also reduce the delay of the patient receiving the correct alternative treatment<sup>5</sup>.

Finally, several issues to assess the quality of cost-effectiveness in the cancer therapy managements have become available. An important exam-

ple is the National Institute for Health and Clinical Excellence (NICE). NICE forms a diverse clinical Advisory committee, which stimulates Pharma and Academic communities to produce a robust set of data, including the design and data source, for economic models of personalized healthcare<sup>6</sup>.

It is well known that molecular genetics counseling performed before selected cancer treatment, provide lower overall medical costs and higher quality of life<sup>5</sup>. NICE, also providing a method to measuring Quality-Adjusted Life-Years (QUALYs); metrics that combine heterogenic information on outcomes, analytical, and cost-effectiveness for each treatment<sup>7</sup>.

We believe that the right way to face these challenges is based on a multidisciplinary treatment approach and to rationalize the costs of these treatments due to aimed-interventions<sup>8</sup>.

## CONFLICT OF INTERESTS:

The Authors declare that they have no conflict of interests.

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