



COMMENTARY: THE ECONOMIC FACE OF EPIGENETIC SIGNATURE IN CANCER PREVENTION

Comment to: Hypermethylation of Glutathione-S-Transferase as plasmatic molecular Biomarker for prostate Cancer. Sinisi AA et al, WCRJ 2014; 1(4): e403.

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It is well known that epigenetic tests could allow overall medical costs and provide higher quality of life and longer life expectancy¹.

The authors mentioned in their results that the specific evaluation of methylation status of GSTP1 gene may be cost-effectiveness and could be used extensively for cancer prevention. Recent progresses have provided exceptional opportunities to identify prognostic and predictive markers of efficacy to chemotherapy. Genetic markers can be used to identify patients who will benefit from therapy, exclude patients at high risk to develop severe toxicity, and adjust dosing².

Furthermore, trials evaluating the economic impact of epigenetic testing in the cancer prevention is still low. Furthermore, the major issues to consider for the clinical laboratories (who are responsible for providing epigenetic services), are: i) the availability of FDA-cleared guidelines; ii) the current absence of public reimbursement; iii) the need for genotyping accuracy and choice of eligible methods³; and iv) the need to find clinical expertise to interpret laboratory data results⁴. However, there exist a persistent derisory known in of education of both the physicians regarding epigenetics test. The current knowledge of healthcare professionals regarding epigenetics is still low, and school curricula are only slowly including teaching of this subject in their courses. Epigenetic knowledge is rapidly developing and

changing, and it is imperative that healthcare professionals keep abreast of the advances and clinical indications⁵.

Moreover epigenetics 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 antioxidant treatment⁶.

Finally, several issues to assess the quality of cost-effectiveness in the cancer therapy managements have become available. An important example 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 healthcare⁷.

It is well known that molecular genetics counseling performed before selected cancer treatment, provide lower overall medical costs and higher quality of life⁶. NICE, also providing a method to measuring Quality-Adjusted Life-Years (QUALYs); methods that combine heterogenic information on outcomes, analytical, and cost-effectiveness for each treatment⁸.

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-interventions⁹.



CONFLICT OF INTERESTS:

The Authors declare that they have no conflict of interests.

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