

FIGURE 12

Precision Medicine

Precision medicine is broadly defined as treating patients based on characteristics that distinguish them from other patients with the same disease. As shown in the figure, in oncology, the factors that contribute to the uniqueness of a patient and his or her cancer include, but are not limited to, the person's genome, the genome and epigenome of his or her cancer, disease presentation, gender, exposures, lifestyle, microbiome, and other comorbidities. Currently, genomics is the

predominant factor influencing precision oncology, but as we learn more about the additional factors, we can create an even more personalized approach to cancer treatment. It is important to note, however, that the cost-effectiveness of such profiling still needs to be evaluated alongside ongoing efforts that define which and to what extent such profiling improves outcomes for individuals.

