PRRedicTor or PPQ

The PPQ/PRRedicTor was developed to predict response to peptide receptor radionuclide therapy (PRRT) in bronchopulmonary and gastroenteropancreatic neuroendocrine tumors. It has two outputs based on tumor grade and expression of genes involved in metabolism and growth factor signaling. Patients are classified as either a “Responder” (someone who will respond to PRRT and experience disease stabilization and a longer time to progression – usually >18 months after the end of PRRT) or “Non-responder” (someone who will have a shorter time until disease progresses – usually ~12 months after the start of PRRT). Patients who are predicted as “Non-responder” may require additional therapies to stabilize their disease.

PPQ Methodology and Score Calculation

The PPQ is based on an algorithm that combines normalized gene expression from eight target genes (amplified by PCR from peripheral blood (EDTA-collected) samples) and the histological grade of the tumor [1-4]). The algorithm was tested and developed in more than 500 patients treated with PRRT or with somatostatin analogues. It has a high sensitivity (>90%) and specificity (>90%) for predicting response to PRRT [1-2].

Laboratory Developed Test (LDT)

This test was developed and its performance characterized by Wren Laboratories LLC, which is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) and is qualified to perform high-complexity clinical testing. This LDT has not been approved by the European Medical Association (EMA) or the Food and Drug Administration (FDA).

References

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2. Bodei et al. Eur J Nucl Med Mol Imaging. 2018 Jul;45(7):1155-1169.
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