Molecular imaging of pancreatic and rectal cancer: on a path towards optimized detection and response prediction

Vuijk, F.A.

STELLINGEN

behorend bij het proefschrift

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1. MRI is an essential tool in the diagnosis of rectal cancer, but clinicians should be aware of its limitations and their influence on treatment choice (this thesis).
2. Response prediction based on a select combination of clinical, laboratory, imaging, and pathological features in rectal cancer patients holds promise for the future and can potentially improve treatment outcome, avoid futile treatment and side effects, and potentially even save costs (this thesis).
3. Immunohistochemistry is a commonly used method to select novel targets for imaging and therapeutic purposes, but positive results from these experiments don't necessarily translate into clinical success (this thesis).
4. A PSMA PET/CT should only be considered in patients with gastrointestinal tumors if there is also high expression of PSMA present in the biopsy material (this thesis).
5. The use of dual labeled (e.g. both fluorescent and radioactive) molecular imaging tracers should not be the ultimate goal. Separate tracers allow for more flexibility in clinical practice and are therefore equally valuable.
6. As pancreatic cancer is known for its high stromal content, FAPI targeted molecular imaging is a very promising tool and might overcome previous limitations of [^{18}F]FDG PET/CT.
7. If in the future clinicians would base treatment choices on mutations found in biopsy material, they should be aware that due to tumor heterogeneity, these mutations might not be representative for the whole tumor and therefore have disputable predictive value.
8. To ensure clinical utility, the development of treatment response prediction algorithms should prioritize using data gathered in the diagnostic workup of cancer patients (or use other data which require limited additional time and/or resources to acquire). Molecular imaging tools have a great potential to generate significant cost savings that can fund their application.
9. Simplicity (in e.g. predicting and monitoring response) is the highest goal, achievable when you have overcome all difficulties. – adapted from Frédéric Chopin
10. Research is seeing what everybody else has seen, and thinking what nobody else has thought. The best researchers have a large imagination and dare to dream and fail – adapted from Albert Szent-Gyorghyi
11. If we knew what we were doing, it would not be called research, would it? Sometimes failure is just as important as success, knowing something doesn't work is valuable information too – adapted from Albert Einstein