

Performing cancer research as a basic research scientist without clinical education and daily based contacts to individual fates of patients suffering from cancer, one sometimes tends to focus on certain research topics only, without proper contemplation of the whole picture.

To circumvent these limitations, scientists have to widely open their eyes, integrating different perspectives, whether clinically or personally, into their main research areas. One way is communication; with patients and relatives, with clinicians, with researchers of different fields of interest, with friends and families. Another way is to actually step into the clinic, being a co-traveler on the patients journey.

A third way is to open their eyes on publications and research results, covering different topics of cancer and cancer research. This way, although easy to step onto, is often hindered by lack of time and background knowledge.

Therefore, it is my pleasure to compose a preface on the book *Key Leaders' Opinion on Novel Progress in Diagnosis and Treatment of Prostate Cancer (First Edition)*. This textbook covers a plethora of distinct views on the disease of prostate cancer. It provides insights into novel diagnostic and treatment strategies but also sheds light on individual and human aspects of the disease. The topics discussed cover clinically related aspects; e.g., surgery and medical treatment as well as advances in radiotherapy but also translationally facets, e.g., precision medicine and novel research perspectives. This textbook is not intended to basic researchers only; but it provides insights into a variety of prostate cancer topics; making it beneficial for anyone working in the prostate cancer area.

Prostate cancer is a disease, for which tremendous research success was seen during the past decades. Nonetheless, the increase in knowledge on several distinct aspects of this disease might be frightening. However, that's the way how translational research should work!

The sole transfer of basic research into the clinic might be the easiest way to define translational research. Though, the many facets of prostate cancer are only uncovered slowly. Whether it might be watchful waiting or active surveillance within the early stages of prostate cancer or the neuroendocrine differentiation of prostate cancer in later stages of the disease; in the end it'll come to the individual patient.

Personally—and again from the point of view of a basic researcher—the field of liquid biopsy, whether circulating tumor DNA, or circulating tumor cells, offers stunning clinical opportunities. Do we have to look at the patients' blood only? Analysis of urine biomarkers might also provide insights into tumor processes. The applications of liquid biopsy might be endless, ranging from early detection of minimal residual disease after surgery to real time monitoring of treatment responses, even in late stages of the disease. Overall, it offers a giant leap into personalized tumor treatments.

When thinking on personalized cancer treatments, a lot of other questions arise: Which patient might benefit from which kind of treatment at which time? Can we safely find patients who need adjuvant treatment after surgery or radiation therapy to the prostate and differentiate those from the patients, who do not. When do we have to admit that actual treatments do not work anymore? How can we improve early treatment upon biochemical recurrence? Which patients must be sequenced to detect somatic or germline mutations, making them eligible for DNA damage response treatments? Are there any biomarkers, predictive or prognostic, to be clinically applied in late stages of the disease?

On the contrary, personalized medicine might also imply questions, which aren't covered by sole lab work: Can we spare unnecessary therapy? How do we treat men suffering from prostate cancer at the final stage of disease? How can we integrate artificial intelligence into clinical applications? Are there any other factors related to risk increase?

Many of these questions are the basis for the researchers providing their latest results within this textbook. Some of them might be answered—at least partially. Other results might raise novel questions and opportunities, how to treat prostate cancer patient at certain stages of disease.

We are only at the beginning of a novel era of prostate cancer treatment.



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