

2020 Research Awards

Project Title:

A multifaceted precision approach to high risk prostate cancer

Lead Investigator:

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Collaborative Project Team:

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Project Summary:

Despite the best of care and modern treatments, 50% or more of men with high risk prostate cancer treated definitively with curative intent will have recurrence of cancer and potentially require further therapies. This translates into significant costs financially, to quality of life and to life itself. We aim to use a precision medicine approach for men with high risk prostate cancer at significant risk of cancer recurrence. We take samples of prostate cancer from men with high risk cancer at the time of surgery and use a combination of cutting edge technologies to analyse individual patient's cancer.

We are using various culture technologies to grow the cancer in the laboratory for drug screening as well as DNA sequencing of tumors to assess if there are potential targets for drug therapies or clinical trials. If cancer recurrence does occur in the future this information could be critical to selection of appropriate and effective individualised treatments - "forewarned is forearmed". If the initial pilot study demonstrates utility, a larger clinical trial where this information will be utilised for the future management of men at the time of cancer recurrence would be instituted.

Research Benefits:

We may be able to improve outcomes in men whose cancer returns by identifying therapies that are effective (or ineffective) before use in the patient. Having this kind of information early may speed referral for clinical trials, improve treatment plans, and reduce time to implementation of individualised treatment strategies. One of the first men enrolled in our study has unfortunately developed recurrent disease and will be the first to undergo drug screening in the lab to determine the most effective treatment for his cancer and indicate the potential power of this approach moving forward.



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