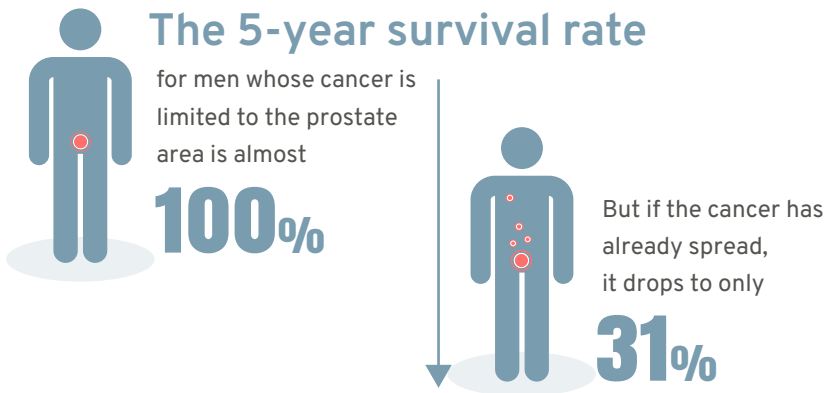
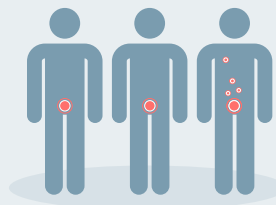
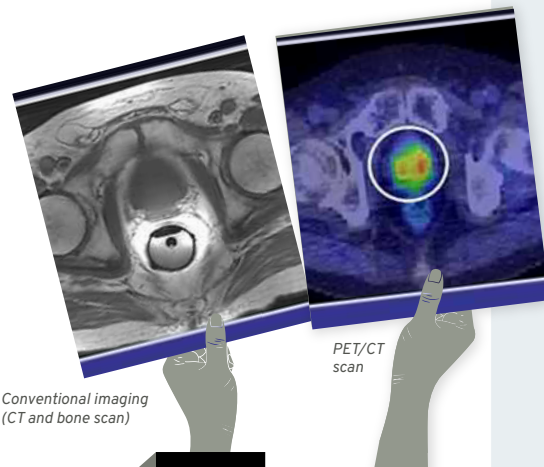


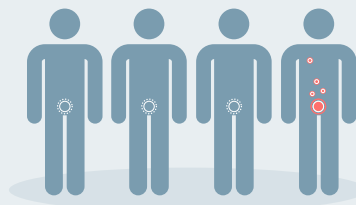
WHY WE NEED TO IMPROVE IMAGING TECHNIQUES



More accurate imaging allows better and earlier decisions around men's clinical management.



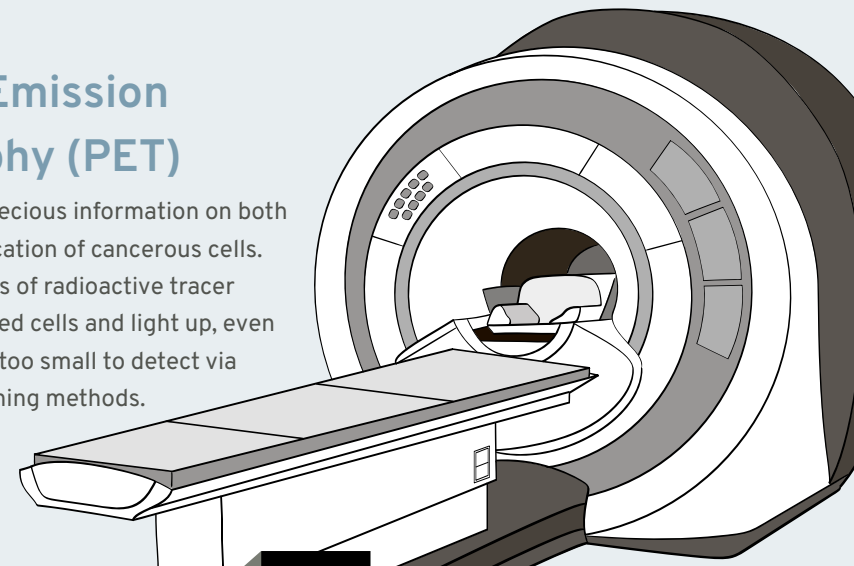
At the time of diagnosis, **1 IN 3** men's cancer has already spread beyond the prostate bed and will require more intense treatment.



After initial treatment, **1 IN 4** men's cancer returns within 10 years of initial treatment. Earlier detection means men can be offered additional treatment to prevent the disease from progressing further.

Positron Emission Tomography (PET)

imaging reveals precious information on both the activity and location of cancerous cells. Very small amounts of radioactive tracer binds to the targeted cells and light up, even when the cells are too small to detect via conventional scanning methods.



Since 2013, Movember has committed almost **\$5M** to the GAP 2 initiative and led to notable outcomes:



7 Publications in highly regarded scientific journals




led to an additional **\$22.3 M** in leverage funding

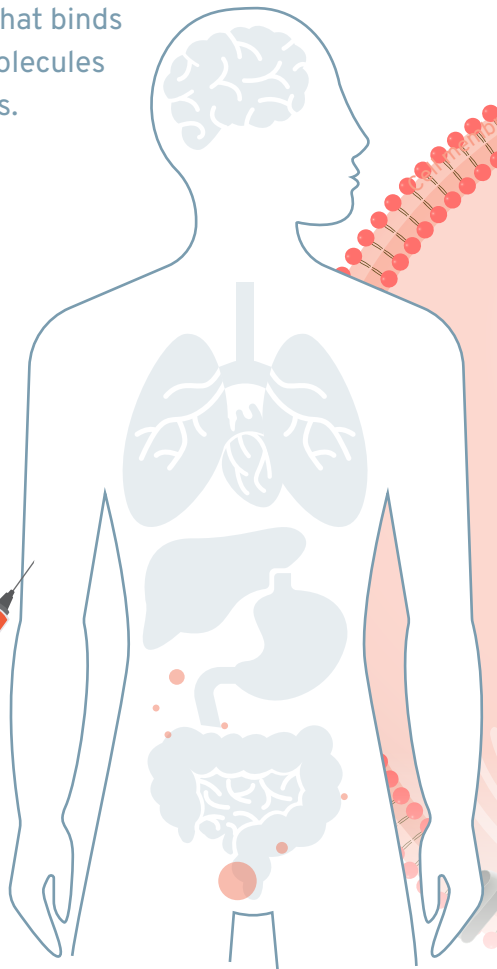


contributed to the original research on the **2 FDA approved PET imaging tracer** with 1 more approval expected in 2021

RADIOTRACERS BEING STUDIED

PET imaging radiotracers are made up of two components: a **radioactive isotope** (commonly ^{11}C , ^{18}F or ^{68}Ga), and a **ligand** that binds to targeted molecules on cancer cells.

-  ^{11}C
-  ^{18}F
-  ^{68}Ga



Choline
is absorbed more in prostate cancer cells than in healthy cells, leading to increased level of Choline.

PSMA
(Prostate Specific Membrane Antigen) is a molecule found abundantly on the surface of prostate cancer cells.

FDHT
is a derivative of testosterone. It binds to increased level of androgen receptors on prostate cancer cells.

Fluciclovine
is a synthetic amino-acid preferentially taken up by prostate cancer cells.

Prostate cancer cell

PROJECT #1
 ^{11}C -CHOLINE VS ^{68}Ga -PSMA COMPARATIVE STUDY

PROJECT #2
 ^{18}F -DCFPyL RADIOTRACER DEVELOPMENT

PROJECT #3
 ^{18}F -PSMA VS ^{18}F -FDHT COMPARATIVE STUDY

PROJECT #4
 ^{18}F -FLUCICLOVINE RADIOTRACER DEVELOPMENT



Clinical validation

Pending regulatory approval

Regulatory approved

Commercially available

Research Translation Pathway

PROJECT #1

**¹¹C-CHOLINE
VS ⁶⁸GA-PSMA
COMPARATIVE STUDY**



The **PROPS study** compared the performance of the two radiotracers in detecting tumours in men whose cancer returned after initial treatment.

The results showed that ⁶⁸Ga-PSMA was able to detect twice the number of prostate cancer tumours compared to ¹¹C-Choline.

This has led to a change in clinical management for 63% of men.

In one other Movember project - the **proPSMA study** - PET imaging with ⁶⁸Ga-PSMA PET imaging was shown to be almost one third more accurate than standard imaging (CT and bone scan).

PROJECT #2

**¹⁸F-DCFPyL
RADIOTRACER
DEVELOPMENT**



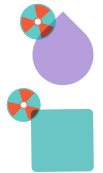
The team worked on the initial development of ¹⁸F-DCFPyL radiotracer, which was successfully licensed to **Progenic Pharmaceuticals** for subsequent development and commercialisation.

It has been studied in two large clinical trials - **OSPREY** and **CONDOR** - and was shown to accurately detect prostate cancer tumours both at initial diagnostic as well as disease recurrence.

Based on the positive outcomes from both clinical trials, this radiotracer is expected to receive FDA approval in 2021.

PROJECT #3

**¹⁸F-FDHT
VS ¹⁸F-PSMA
COMPARATIVE STUDY**



Leveraging the original GAP2 dataset in ¹⁸F-FDHT, the team received a Challenge Award in 2019 from the Prostate Cancer Foundation to transform this project into a comparative study between ¹⁸F-FDHT and ¹⁸F-PSMA.

As the only active project within GAP2, this project will compare the prognostic value of these two radiotracers in men with advanced prostate cancer treated with androgen receptor-directed therapy.

PROJECT #4

¹⁸F-FLUCIGLOVINE RADIOTRACER DEVELOPMENT



The research team worked on the initial development of this radiotracer. It was then passed onto **Blue Earth Diagnostic** early on for subsequent development and commercialisation.

Also known as **Axumin®**, it became the first PET imaging radiotracer approved by the FDA in 2016 to detect prostate cancer in men with elevated level of PSA after initial treatment.

THANK YOU

The GAP 2 program was funded thanks to the generosity of the Movember community.



MOVEMBER®

**CHANGING THE FACE
OF MEN'S HEALTH**