

### Radioisotope

Cu-64, copper-64  
Transition metals  
T<sub>1/2</sub> : 12,7 h

### Production

Cyclotron production  
<sup>64</sup>Ni(p,n)<sup>64</sup>Cu

### Radiation

Positron (β<sup>+</sup>)

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### Use

PET scan of multiple cancers expressing bombesin receptor, including prostate, breast and ovarian cancers.

### Target/Mechanism

<sup>64</sup>Cu-SAR-Bombesin targets the gastrin-releasing peptide receptor (GRPr) present on cells of many types of cancers. GRPr is found in approximately 75-100% of prostate cancers, including PSMA-negative prostate cancers (PCa).

### Insight

A Phase II investigator-initiated trial (IIT) is being held in St Vincent's Hospital (Sydney/Australia). The trial called BOP (Copper-64 SAR Bombesin in Prostate Specific Membrane Antigen (PSMA) negative Prostate Cancer) is assessing the safety of <sup>64</sup>Cu-SAR-Bombesin as well as looking at the diagnostic potential across two different groups of men:

1. Participants with suspected biochemical recurrence (BCR) of their PCa who have negative PSMA positron emission tomography (PET) imaging scans or low PSMA expression disease
2. Participants with metastatic castrate resistant prostate cancer (mCRPC) who are not eligible for PSMA therapy.

N patients = 30

