

## **5-ALPHA REDUCTASE (5AR) INHIBITOR ROLE IN ANDROGEN DEPRIVATION THERAPY**

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With removal of the prostate that includes all cancer cells, production of T increases while at the same time conversion to DHT decreases, and without any presence of CaP, patients should expect full recovery.

From my personal research, I came to the following conclusions of the importance of 5-Alpha Reductase (5AR) inhibitors if all prostate cancer cells were not removed or eradicated and androgen deprivation therapy (ADT) is to be prescribed:

Androgen-sensitive human prostate cancer cells (LNCaP) have increased 5Alpha Reductase (5AR) activity. This increased activity, along with involvement of cancer cell lines DU145 and HPC-36M, stimulates the metabolic conversion of testosterone (T) to dihydrotestosterone (DHT).

It appears it is the presence of CaP, when not having been totally removed or eradicated, that influences increased conversion of T to DHT.

With any CaP being left behind in the prostatic bed or having migrated, but so insignificant as to not being visible in imaging, the remaining CaP and increased T production will stimulate increased 5AR activity. Increased 5AR activity will stimulate T conversion to DHT and consequent CaP development.

DHT is known to be a much more powerful stimulant to CaP development than T.

With an increase in 5AR activity causing an increase of T conversion to DHT it stands to reason that this conversion must be inhibited.

This leads to the argument I totally support, as do those Medical Oncologists we know who specialize specifically in prostate cancer research and treatment, that a 5AR inhibitor such as dutasteride/Avodart (my preference) or finasteride/Proscar should be an integral part of androgen deprivation therapy (ADT).