

DIHYDROTESTOSTERONE (DHT) CONTROVERSY IN ANDROGEN DEPRIVATION THERAPY (ADT)

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WHY IS BLOCKING DHT IMPORTANT?

There is an abundance of activity that occurs in prostate cancer cells including the presence of androgen receptors, 5Alpha Reductase enzymes (5AR), testicular androgen/testosterone (T), DHEA-S and androstenedione adrenal androgen, and dihydrotestosterone (DHT) all involved. The T and adrenal androgen (both less powerful stimulants to prostate cancer (PC) development) come in contact with 5AR and are converted to DHT. DHT has a stronger affinity to access androgen receptors, and with access, is also a much stronger stimulant to PC development. Antiandrogens are administered to block androgen receptors from any T, adrenal androgen, and particularly DHT access that could stimulate PC development. Yet, because of DHT's stronger affinity to access at least some of the androgen receptors despite the antiandrogens, PC development can still occur. Therefore, to prevent the presence of DHT, 5AR inhibitors (dutasteride/Avodart, finasteride/Proscar) are prescribed to prevent T conversion to DHT. When men are prescribed triple androgen/hormonal blockade with an LHRH agonist, an antiandrogen, and a 5Alpha Reductase (5AR) inhibitor, it has been established that with this protocol being effective PSA level should drop into the ultrasensitive range below 0.05ng/ml and testosterone (T) to ≤ 20 ng/dl. I have been including that when a 5AR inhibitor dutasteride/Avodart or finasteride/Proscar is prescribed, dihydrotestosterone (DHT) level should be expected to fall to < 3.0 ng/dl. I make it a habit to maintain files to support such conclusions. However, I have been unable to find such reference and can only recall that I found that level noted somewhere in my research, but have since been unable to establish where. A PC friend questioned if I could provide reference to that level and I was unable to do so. In Medical Oncologist Stephen Strum's excellent article on the Prostate Cancer Research Institute website www.pcri.org regarding Intermittent Androgen Deprivation (October 2000 Insights), he remarked that < 30 is the level in which DHT no longer needs to be checked. I asked Dr. Strum if he could clarify if a threshold of < 3.0 ng/dl has ever been established. He replied that he cannot recall if such a threshold had been mentioned, but since these 5AR inhibitors reduce the DHT level so significantly, this level does not have to be monitored. Normal DHT levels are between 30ng/dl and 100ng/dl (see Form F-3, page F-11 in "A Primer on Prostate Cancer – The Empowered Patient's Guide"), thus a level less than 30ng/dl would indicate sufficient inhibition. Accordingly, for those who may have filed the information that a preferred DHT threshold while prescribed a 5AR inhibitor should be < 3.0 ng/dl, please disregard.

DIHYDROTESTOSTERONE (DHT) LEVEL NOT DROPPING DESPITE 5ALPHA REDUCTASE (5AR) INHIBITORS.

Adrenal androgens such as DHEA-S and androstenedione may contribute to the testosterone pool. Check these levels. They should be markedly suppressed. If either are in the normal range then these precursors of testosterone may be the cause. In such cases HDK (high-dose ketoconazole) or Nizoral along with hydrocortisone (HC) is usually used. There is recent literature to support the use of a different steroid called Aristocort (Triamcinolone) to suppress the androgen receptor more effectively. Aristocort is available via the Internet from a Canadian pharmacy. I believe it is also available in Germany. To review the article regarding "When Should You Start Treatment With Ketoconazole" by Mark Scholz, Richard Lam, Brad Guess, and Ralph Blum, please click onto the URL below then scroll down to page 5.

http://www.paactusa.org/newsletters/2005/cc_vol_21-4.pdf