

Saving Hearts and Lives in Advanced Prostate Cancer: Choosing Between ADT Agonists and Antagonists: Clinical Case 2

References

- Abidov A, Chehab O. Cardiovascular risk assessment models: have we found the perfect solution yet? *J Nucl Cardiol*. 2020;27(6):2375-2385. doi:10.1007/s12350-019-01642-x
- American College of Cardiology. ASCVD risk estimator plus. Accessed November 1, 2021. <https://tools.acc.org/ascvd-risk-estimator-plus/#!/calculate/estimate>
- Bosco C, Bosnyak Z, Malmberg A, Adolfsson J, Keating NL, Van Hemelrijck M. Quantifying observational evidence for risk of fatal and nonfatal cardiovascular disease following androgen deprivation therapy for prostate cancer: a meta-analysis. *Eur Urol*. 2015;68(3):386-396. doi:10.1016/j.eururo.2014.11.039
- Hu JR, Duncan MS, Morgans AK, et al. Cardiovascular effects of androgen deprivation therapy in prostate cancer: contemporary meta-analyses. *Arterioscler Thromb Vasc Biol*. 2020;40(3):e55-e64. doi:10.1161/ATVBAHA.119.313046
- Klotz L, Boccon-Gibod L, Shore ND, et al. The efficacy and safety of degarelix: a 12-month, comparative, randomized, open-label, parallel-group phase III study in patients with prostate cancer. *BJU Int*. 2008;102(11):1531-8. doi:10.1111/j.1464-410X.2008.08183.x
- LUPRON DEPOT (leuprolide) [prescribing information]. AbbVie Inc. Approved 1989. Revised March 2019. https://www.accessdata.fda.gov/drugsatfda_docs/label/2019/020517s042,019732s044lbl.pdf
- Lopes RD, Higano CS, Slovin SF, et al. Cardiovascular safety of degarelix versus leuprolide in patients with prostate cancer: the primary results of the PRONOUNCE randomized trial. *Circulation*. 2021;144(16):1295-1307. doi:10.1161/CIRCULATIONAHA.121.056810
- Melloni C, Slovin SF, Blemings A, et al. Cardiovascular safety of degarelix versus leuprolide for advanced prostate cancer: the PRONOUNCE trial study design. *JACC CardioOncol*. 2020;2(1):70-81. doi:10.1016/j.jaccao.2020.01.004
- Meng F, Zhu S, Zhao J, et al. Stroke related to androgen deprivation therapy for prostate cancer: a meta-analysis and systematic review. *BMC Cancer*. 2016;16(1):180. doi:10.1186/s12885-016-2221-5
- National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Prostate Cancer (v1.2022). Updated September 10, 2021. Accessed October 1, 2021. https://www.nccn.org/professionals/physician_gls/pdf/prostate.pdf
- National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Survivorship (v3.2021). Updated August 23, 2021. Accessed December 1, 2021. https://www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf
- Okwuosa TM, Morgans A, Rhee JW, et al. Impact of hormonal therapies for treatment of hormone-dependent cancers (breast and prostate) on the cardiovascular system: effects and modifications: a scientific statement from the American Heart Association. *Circ Genom Precis Med*. 2021;14(3):e000082. doi:10.1161/HCG.0000000000000082

Sari Motlagh R, Abufaraj M, Mori K, et al. The efficacy and safety of relugolix compared with degarelix in advanced prostate cancer patients: a network meta-analysis of randomized trials. *Eur Urol Oncol*. 2021;doi:10.1016/j.euo.2021.07.002

Shim M, Bang WJ, Oh CY, Lee YS, Cho JS. Effectiveness of three different luteinizing hormone-releasing hormone agonists in the chemical castration of patients with prostate cancer: goserelin versus triptorelin versus leuprolide. *Investig Clin Urol*. 2019;60(4):244-250. doi:10.4111/icu.2019.60.4.244

Shore ND. Current and future management of locally advanced and metastatic prostate cancer. *Rev Urol*. 2020;22(3):110-123.

Shore ND, Saad F, Cookson MS, et al. Oral relugolix for androgen-deprivation therapy in advanced prostate cancer. *N Engl J Med*. 2020;382(23):2187-2196. doi:10.1056/NEJMoa2004325

Sun L, Parikh RB, Hubbard RA, et al. Assessment and management of cardiovascular risk factors among us veterans with prostate cancer. *JAMA Netw Open*. 2021;4(2):e210070. doi:10.1001/jamanetworkopen.2021.0070

TRELSTAR® (triptorelin) [prescribing information]. Allergan. Approved 2000. Revised December 2018. https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/020715s040,021288s035,022427s015lbl.pdf

Zhao J, Zhu S, Sun L, et al. Androgen deprivation therapy for prostate cancer is associated with cardiovascular morbidity and mortality: a meta-analysis of population-based observational studies. *PLoS One*. 2014;9(9):e107516. doi:10.1371/journal.pone.0107516

ZOLADEX® (goserelin) [prescribing information]. AstraZeneca. Approved 1989. Revised December 2020. https://documents.tersera.com/zoladex-us/3.6mg_MagnumPI.pdf

ZOLADEX® (goserelin) [prescribing information]. AstraZeneca. Approved 1996. Revised December 2020. https://documents.tersera.com/zoladex-us/10.8mg_MagnumPI.pdf

Glossary

2°, secondary
AA, antiandrogen
ABI, abiraterone
ADT, androgen deprivation therapy
AE, adverse event
AHA, American Heart Association
ALT, alanine transaminase
ASCVD, atherosclerotic cardiovascular disease
AST, aspartate transaminase
BMI, body mass index
BP, blood pressure
CAB, combined androgen blockade
CHD, coronary heart disease
CI, confidence interval
cT2, palpable tumor confined in prostate
CV, cardiovascular
CVD, cardiovascular disease
DOC, docetaxel
EBRT, external beam radiation therapy
ECG, electrocardiogram
FBG, fasting blood glucose
FSH, follicle stimulating hormone
GnRH, gonadotropin releasing hormone
GI, gastrointestinal
HbA1c, glycated hemoglobin
HDL, high-density lipoprotein
HR, hazard ratio
HTN, hypertension
M0, nonmetastatic
LDL, low-density lipoprotein
MACE, major adverse cardiovascular events
Mgmt, management
MI, myocardial infarction
NCCN, National Comprehensive Cancer Network
nmHSPC, nonmetastatic hormone-sensitive prostate cancer
PCa, prostate cancer
PSA, prostate-specific antigen
RF, risk factor
RP, radical prostatectomy
RR, relative risk
RT, radiation therapy
SC, subcutaneous
SCD, sudden cardiac death

T, testosterone

UTI, urinary tract infection

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