



HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS

Published-Ahead-of-Print June 14, 2006, DOI: 10.2164/j androl. 106.000141

Journal of Andrology, Vol. 27, No. 6, November/December 2006

Copyright © American Society of Andrology

DOI: 10.2164/j androl.106.000141

# Circulating Inflammatory Cytokine Expression in Men With Prostate Cancer Undergoing Androgen Deprivation Therapy

MARCELLO MAGGIO\*, AMANDA BLACKFORD<sup>†</sup>, DENNIS TAUB\*, MICHAEL CARDUCCI<sup>‡</sup>, ALESSANDRO BLE\*, E. JEFFREY METTER\*, MILENA BRAGA-BASARIA<sup>§</sup>, ADRIAN DOBS<sup>§</sup> AND SHEHZAD BASARIA<sup>\*</sup>, §

From the \* Longitudinal Studies Section, Clinical Research Branch and the Laboratory of Immunology, National Institutes of Health, National Institute on Aging, Baltimore, Maryland; † the Department of Oncology, Division of Biostatistics; Johns Hopkins University School of Medicine, Baltimore, Maryland; the † Department of Oncology, Prostate Cancer Research Program, Kimmel Cancer Center at Johns Hopkins, Baltimore, Maryland; and the § Department of Medicine, Division of Endocrinology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Correspondence to: Dr Shehzad Basaria, Department of Medicine, Division of Endocrinology and Metabolism, Johns Hopkins University School of Medicine, Bayview Medical Center, 4940 Eastern Avenue, Suite B-114, Baltimore, MD 21224 (e-mail: sbasari1{at}jhmi.edu).

### This Article

- ▶ Full Text
- Full Text (PDF)
- All Versions of this Article: 27/6/725 most recent
  Author Manuscript (PDF) FREE
  Author Manuscript (PDF) FREE
- Alert me when this article is cited
- Alert me if a correction is posted

### Services

- ▶ Similar articles in this journal
- Similar articles in PubMed
- Alert me to new issues of the journal
- Download to citation manager

## Citing Articles

- Liting Articles via HighWire
- Liting Articles via Google Scholar

#### Google Scholar

- Articles by Maggio, M.
- Articles by Basaria, S.
- ▶ Search for Related Content

## PubMed

- ▶ PubMed Citation
- Articles by Maggio, M.
- Articles by Basaria, S.

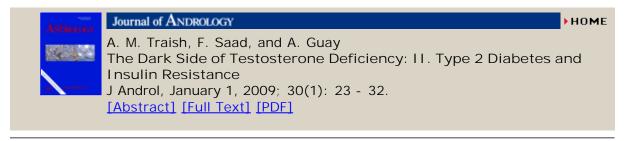
Prostate cancer (PCa) is one of the most common cancers in men. Androgen

deprivation therapy (ADT) is employed in the treatment of patients with metastatic or recurrent PCa, resulting in castrate levels of testosterone. Recent studies have shown that male hypogonadism is associated with increased levels of proinflammatory and diminished concentrations of anti-inflammatory cytokines, which normalize upon testosterone treatment. Furthermore, an inflammatory state is associated with osteoporosis, sarcopenia and metabolic abnormalities. We examined 3 groups of men: 1) 20 men with PCa undergoing ADT for at least 12 months prior to the onset of the study (ADT group); 2) 18 age-matched men with non-metastatic PCa who had undergone local surgery and/or radiotherapy and had not yet received ADT and were eugonadal (non-ADT group); and 3) 20 age-matched healthy eugonadal men (control group). None of the subjects were suffering from any acute or chronic inflammatory conditions. Mean age was similar in the 3 groups (P = .41). Men in the ADT and non-ADT groups had higher BMI compared to the control group (P = .0005 and P = .01, respectively). Men in the ADT group had significantly lower mean serum total (P < .0001) and free (P < .0001) testosterone and estradiol (P < .0001) levels compared to the other 2 groups. No significant differences in serum levels of pro-inflammatory or anti-inflammatory cytokines were observed between the 3 groups. These data suggest that men with PCa undergoing long-term ADT do not have elevated levels of pro-inflammatory cytokines compared to age and disease matched controls. Prospective studies are needed to evaluate for any acute changes in these inflammatory markers that might

occur after the initiation of ADT.

Key words: Hypogonadism, inflammation

# This article has been cited by other articles:



HOME | HELP | FEEDBACK | SUBSCRIPTIONS | ARCHIVE | SEARCH | TABLE OF CONTENTS

Copyright © 2006 by The American Society of Andrology.