

**Joint Webinar on**  
**3<sup>rd</sup> Annual summit on**  
**Cell Signaling and Cancer Therapy**  
**&**  
**15<sup>th</sup> World Congress on**  
**Advances in Stem Cell Research and Regenerative Medicine**  
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### **A systematic review of the activity of androgen therapy in advanced breast cancer**

Background: 80% of breast cancers (BC) are estrogen receptor (ER) positive, endocrine therapy (ET) forms a critical part of the treatment of such BCs. ET with androgen therapy was clinically active but fell from use due to the adverse effects and the advent of efficacious ER-directed therapies fell from use. Improvements in our understanding of the role of androgens and the androgen receptor in ER+ BC alongside the advent of selective androgen receptor modulators (SARM) has led to a AT being revisited. A systematic review and meta-analysis of randomised trials of AT was undertaken to investigate the efficacy of different androgenic compounds on advanced breast cancer. Methods: A systematic search of relevant randomised control trials was carried out by searching Pubmed, Scopus and additional references from each paper. Testosterone Propionate, Fluoxymesterone, Calusterone and the combination of Tamoxifen and Fluoxymesterone were the focus of this review, and their risk ratios and meta-analysis were calculated from the number of objective regressions. Results: Testosterone Propionate had an overall response rate (ORR) of 21.5% (95% CI; 28-40%). Fluoxymesterone produced no statistically significant data, but had an ORR of 18% (95% CI; 18-25%). The effectiveness of calusterone was unclear given the limited number of studies. However, the combination of tamoxifen and fluoxymesterone over tamoxifen produced a risk ratio of 1.38 (1.04, 1.83) in favour of combination. Conclusion: AT within the context of this review has evidence of clinical activity. Of note, combined AR and ER targeted therapy was superior to ER targeted therapy alone. This data supports further clinical investigation of AT in ER-positive BC.

### **Biography**

Dr A Bhojwani has completed his primary medical degree and masters in translation medicine in clinical oncology at the age of 25 years from University of Liverpool. He is a foundation year 3 doctor in the Midlands Deanery.



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