

# Obesity, insulin resistance and prostate cancer: evaluation of patients undergoing cancer treatment at Fundação Assistencial da Paraíba/Brazil in 2023.



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## Introduction

Obesity is rapidly growing as a global health crisis. Added to this information, prostate cancer stands out as the second most prevalent type of cancer in men worldwide, including in Brazil. A significant association links obesity to an increased risk of prostate cancer, linked to advanced, recurrent and fatal forms of the disease. Regarding pathophysiology, adipokines such as leptin and adiponectin may play a role, acting as potential mediators. Initially linked to satiety, leptin has pro-inflammatory and pro-tumor effects, intensifying with increasing body fat. Another vital measure, the waist-to-height ratio (WHR), has emerged as an important cardiovascular indicator, signaling central adiposity above 0.5.

## Methodology

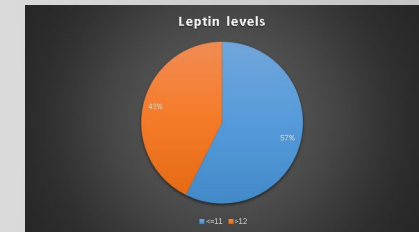
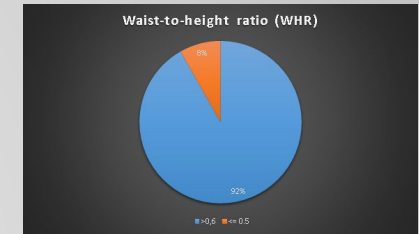
We thoroughly analyzed 61 patients with prostate cancer undergoing cancer treatment at Fundação Assistencial da Paraíba/Brazil, considering variables such as cancer stage, BMI, WHtR and leptin levels.

## Results and Discussion

The results revealed various stages of cancer: 8.19% low risk, 29.5% intermediate, 52.45% high risk, 9.83% metastatic. BMI distribution: 29.5% eutrophic, 45.9% overweight, 24.59% obese (mean: 27,39; median:27,05). WHtR analysis showed 8.2% with WHtR  $\leq$  0.5, 91.8% above (mean: 0,59; median: 0,61). Leptin levels: 57.37%  $\leq$  11, 42.62% exceeded (mean: 16,02; median:9,9).

## Conclusion

The data reveal a worrying trend, linking overweight/obesity with high WHtR. This highlights the intricate connection between insulin resistance, obesity and its potential role in tumor development. More research is crucial to fully understanding the complex link between prostate cancer, obesity and leptin levels. This investigation holds promise for accurate markers of aggressive diseases that affect patient care. Personalized treatments, aligned with risk profiles, seeking a balance between the necessary interventions and reducing undue treatment for lower-risk cases, optimizing well-being.



## References

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