

Circulating Tumor Cell Counts in Patients With Localized Prostate Cancer Including Those Under Active Surveillance

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Study aim: To evaluate the clinical efficacy of a circulating tumor cell (CTC) test in patients with localized prostate cancer, including those under active surveillance.

Methods:

- Compared CTC counts in peripheral blood between prostate cancer patients (n=45) and healthy volunteers (n=17)
- Used epithelial cell adhesion molecule (EpCAM) and prostate-specific membrane antigen (PSMA) as CTC markers
- All cancer patients underwent radical prostatectomy

Key findings:

- EpCAM+ CTC counts were significantly higher in prostate cancer patients compared to healthy volunteers
- 40% of prostate cancer patients had at least one EpCAM+ CTC
- In patients with stage T2 tumors, Gleason pattern 5 and higher grade were positively correlated with EpCAM+ CTC presence
- Among low-risk patients under active surveillance, 50% of those with disease upstaging or upgrading had EpCAM+ CTCs

Conclusions:

- CTC positivity in localized prostate cancer may be associated with more aggressive disease features like Gleason pattern 5
- CTC detection could potentially help identify low-risk patients on active surveillance who may need active treatment
- Larger studies with more sensitive techniques are needed to confirm these findings

The authors suggest CTC testing may have potential as a less invasive biomarker for prostate cancer monitoring, particularly for active surveillance patients, but further research is needed.