Cell enrichment improves the quality of FISH results by providing more epithelial cells to analyze.

Studies have reported up to 82% capture of prostatic cells in voided urine after digital rectal prostate massage. This allows for a non-invasive evaluation of patients with an increased PSA. May also prevent subsequent biopsy procedure, in those patients with previous malignant diagnosis that have not had radiation therapy.

Using EpiSep cell enrichment technology, SunCoast Pathology is able to isolate Prostatic Glandular Epithelial Cells from the specimen and concentrate them onto a slide for genomic Fluorescent in-situ Hybridization (FISH) testing. This is achieved by using a paramagnetic antibody to malignant prostate cells (EpCam 323/3a) which adheres to the malignant cells and allows them to be deposited on a slide using the EpiSep HS enrichment device. The untagged cells are then wicked away from the target area and the preparation is then ready for genomic FISH testing.

EpiSep is an FDA approved device for detecting, isolating, and helping characterize Circulating Tumor Cells.
References


Clinical Validation for EpiSep® Hybridization Slide with +CD138 Plasma Cell Enrichment

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Multiple Myeloma FISH Panel Clinical Validation Study

- **Overview**
- 42 Patients in initial cohort
- 8 probe molecular panel to stratify patients into risk groups*
- 32 patients in final cohort

With sample enrichment:
- 66% of patients with new or additional abnormalities.
- 36% of patients would shift in prognosis from standard risk to high risk.
- 21% increase in patients with uncharacterized IGH rearrangement revealed.
- An average yield increase of 9.7 times more plasma cells (1.2x – 44x range).

*Due to sample and assay conditions, not all patients were screened for all 8 probes

Source: E. Crawford, V. Golembiewski-Ruiz, et al. Validation of Immuno-Magnetic Chromatography As a Novel Method for the in Situ enrichment of Plasma Cells in Bone Marrow. ASH 2012 Poster