Circulating Tumor Cell (CTC) Filtration Technology

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Executive Statement:

This technology represents a breakthrough in early detection of pancreatic cancer through advanced filtration of circulating tumor cells.

Technology Overview:

The document details the development of a novel CTC filtration technology aimed at enriching circulating tumor cells from blood samples, specifically for pancreatic cancer detection. Utilizing carbon nanotube templated microfabrication, the technology promises a high open-area filter capable of processing large volumes with minimal contamination, crucial for effective biomarker detection.

Key Advantages:

- High open-area polymeric filters increase sample throughput
- Low contamination levels, essential for accurate biomarker amplification
- Cost-effective manufacturing process compared to traditional lithographic filters
- Potential for high-yield, low-contamination results in clinical settings

Problems Addressed:

- Challenges in capturing circulating tumor cells efficiently for pancreatic cancer
- Limitations in filter capacity and contamination in existing technologies
- High manufacturing costs of advanced filtration technologies

Market Applications:

- Early detection and monitoring of pancreatic cancer
- Research and development in oncology diagnostics
- Integration into clinical workflows for cancer screening programs