



*Case #639*

## **Identification of Aggressive Papillary Microcarcinomas of the Thyroid**

The most common type of thyroid cancer is papillary thyroid cancer (PTC) and papillary microcarcinomas (PMC), PTC tumors of less than 1.0 cm, now account for about 40% of all PTC tumors. PMC tumors are thought to be relatively innocuous, however a PMC has an incidence of metastases of 20-50% and currently there is no ability to clearly determine if a PMC is indolent or aggressive at diagnosis. Consequently, many patients undergo surgery and may end up overtreated, increasing morbidity, while others may be undertreated, increasing morbidity from re-operation and worse outcomes.

UVM researchers have identified a micro RNA signature in resection samples that distinguishes aggressive from indolent PMC. They are currently validating the signature profiles with a larger cohort of samples and determining of these signatures will be detectable in both fine needle biopsy and in serum samples.

### **Applications:**

- Identification of aggressive PMC of the thyroid.
- Monitor breast cancer patients post-treatment for PMC.
- Platform for the development of novel therapeutics for PMC.

### **Advantages:**

- Distinguishes aggressive from indolent PMC.
- Reduces morbidity from over/under-treatment of PMC.
- Reduces costs from over/under-treatment of PMC.
- Identifies and personalizes specific thyroid cancer treatments.

### **Intellectual Property and Development Status:**

US Non-Provisional Application 15/788,305

Looking for research and development collaborations and licensing partners.

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