## Technology Brief: Predicting tumor aggressiveness.

**Docket Number:** 07B108

| Summary | • Actively dividing tumors appear to progress to a life-threatening condition more rapidly than slowly dividing tumors.  
• The assessment of actively dividing tumors currently involves a manual enumeration of mitotic cells in a histological slide prepared from the tumor and assessed by a trained pathologist.  
• Moffitt researchers have invented a method of using gene expression data to identify patients with slightly more aggressive forms of tumors that might require closer monitoring or chemotherapeutic intervention. |
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| Features and Benefits | • The basic principle is that the gene expression data from a group of selected genes is assessed to identify adenocarcinoma tumor samples with a high rate of mitosis and thus a higher likelihood of having a poor response to treatment.  
• The genes involved are those in the regulation of the cell cycle and the mitotic process, to assess the overall mitotic state of a tumor sample.  
• Gene expression levels can be assessed with data from microarrays or Q-PCR.  
• The genes and the mechanism for evaluating them are possibly applicable to a variety of tumor types in addition to adenocarcinoma. |
| Stage of Development | Planned prospective validation. |
| Inventor | T. Yeatman, S. Enkemann, S. Eschrich |
US patent application filed. |

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