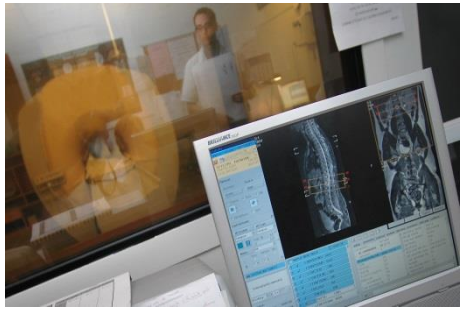
ASSESSMENT OF MALIGNANCY AND PREDICTION OF EFFICACY OF TREATMENT OF TUMOURS



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Background

Assessing the malignancy of a solid tumor and making the survival prognosis of a patient require a microscopic analysis of a tissue specimens from the tumor. The pathologist uses the international TNM (tumor, node, metastases) classification which enables to estimate the patient's chances of survival and to chose the appropriate treatment. However, this technique has some limits. The size of tumor mass and the extent of microscopic invasion remain difficult to assess. In addition, the analysis remains essentially subjective and is time consuming. There is therefore a need for a rapid, objective and reliable method of prognosis of the malignancy of solid tumors.

Technology

The proposed solution is an objective method for prognosis of a cancer based on the analysis of a virtual slide (from a solid tumor specimen) by a software program. Using a machine learning algorithm, 3 patterns emerged from linear quantification of lymphocytes of 117 patients. For example, the relative risk of relapse at 5 years is 16 if you have the pattern 3 (compared to the pattern 1). This technique is more reliable and more rapid than current ones and rounds out the present anatomic-pathology methods to clarify the prognosis derived from the TNM classification. It will enable the assessment of the risk of postoperative recurrence, sensitivity to the various anti-tumor treatments and also the risk for metastases to develop.

Type of partnership desired

AP-HP is looking for an industrial partner for the commercialization of the technology and offers to grant license on the patent.

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Intellectual property

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Stage of development

Optimized prototype

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