With the completion of the Human Genome Project, scientists now are turning their attention to the proteins produced by genes. This emerging field is called proteomics, and it’s the basis of a new cancer consultation service offered by the Department of Pathology and Laboratory Medicine at The University of Texas Medical School at Houston.

The “Consultative Proteomics” service, which started July 1, 2007, analyzes the protein activity in patient tumors, providing information useful in prescribing treatments and determining the risk of recurrence.

The service is based on a type of protein study called morphoproteomics and involves a visual inspection of proteins in malignant cells. The team looks for changes in cellular location and state of activation of the proteins which can help oncologists identify the vulnerable parts of malignant cells.

Consultative Proteomics Service

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“We are trying to outsmart the cancer. We are proposing to take signal transduction data and translate it into potential clinical treatments in collaboration with our clinical colleagues.”

Department of Pathology and Laboratory Medicine
What is Consultative proteomics?
Consultative proteomics using morphoproteomic analysis is a new scientific approach in cancer therapy. It enables us to understand the biology and metabolism of a patient's tumor so that we can better design a therapeutic strategy that should be effective against a tumor while limiting toxicity and minimizing harm to the normal tissues and to the patient (a personalized medicine approach).

How will I benefit from doing this test?
You may be spared unnecessary and sometimes costly therapies and you will receive therapy designed specifically for your cancer.

What are the benefits of the recommended tests?
The recommended tests are designed to expose the vulnerabilities of the tumor to various medications so that the growth of the tumor can be slowed. In addition, the ability of the tumor to withstand and resist chemotherapies may be overcome. It may also aid in the development of a relatively non-toxic maintenance therapy to reduce any potential for metastasis and tumor re-occurrence.

Do I need to have surgery?
Surgery is not necessary for us to perform the testing. A biopsy of your tumor will be sufficient in most cases.

What is needed for this test?
A sample of your tumor tissue obtained by biopsy or previously collected samples are all that we need to perform the testing. You and your oncologist may request previously collected samples from the laboratory that initially examined your tissue and rendered a diagnosis. Once they receive your request, the laboratory will contact us to determine how many samples we need to perform the testing, how they should send the material and to provide us with a copy of the original pathology report. We also need the cooperation and collaboration of your oncologist in providing us with a history of the therapies you have received to date and how effective they were in treating your tumor. We require confirmation of your oncologist's willingness to provide us with follow-up information on your progress in the future. We would also like your permission to contact you directly in follow-up.

What do we need to do to prepare for this test?
No special preparation is necessary on your part to prepare for the testing that we will perform on your tissue specimen.

Have you had experience dealing with all kinds of cancer?
We have profiled all types of cancers using morphoproteomic analysis and have found that we are able to assess all tumors, rare or common using this approach. Together, with our clinical colleagues and the expertise of the oncologist, we have found that a therapeutic strategy can be designed using morphoproteomics as a guide.

Is there any written material about the test that we can take home to read?
We will provide you with scientific literature regarding the testing upon request. Please call our office (713-500-5309) and we will e-mail or mail such materials to you.

What are the risks?
There are no risks to you personally in such testing. We cannot guarantee that the therapeutic strategy guided by the morphoproteomic analysis will be totally without risk to you but the risk versus benefit will be explained to you by your oncologist. Moreover, we pledge to work with your oncologist to develop a regimen that has the highest chance of success with the lowest toxicity profile.

What is the success rate?
We have had measurable success in patients who have failed conventional therapy, particularly in brain tumors, renal cell carcinoma and anecdotally in other patients with rare types of tumors. We are in the process of preparing and submitting our data for publication.

Does insurance cover this test?
The testing is based on interpretive reporting by the pathologist and on the number of immunohistochemical probes that are applied in the morphoproteomic analysis. Insurance and medicare does recognize the CPT coding for such testing but our cost in terms of reagents, technical and graphic support and pathologist's time of performing the testing far exceeds the usual and customary reimbursement.

We will need a guaranteed payment from the patient in advance so that we can invest the time and effort necessary to generate the final report. We will work with you to develop a payment plan and will provide you with an itemized statement and a copy of the report that you can submit to your insurance company or medicare for reimbursement.

How much does this test cost?
Each immunohistochemical probe applied in the morphoproteomic analysis costs $220 and the consultative interpretation by the pathologist is $450, we also have a nonrefundable consult charges which varies depending on the no. of probes. In general, the final cost can range between $2000 and $6500 for each analysis.

What's the best way for us to contact you when we have more questions about the test?
We are always available to clarify any questions regarding the test or the testing performed and the results obtained. This service is available at no additional charge to you. Moreover, we will work with your oncologist to consider alternative therapies in the future in the context of the morphoproteomic findings, once again at no additional charge. You can contact our office at 713-500-5309 and speak to Ms Bheravi Patel, the executive assistant and she will relay your questions and contact information to our pathology team and we will get back to you.

How long will it take for the test results to be completed?
The testing in terms of the technical performance of the immunohistochemical studies and their final interpretation and reporting is generally completed within two weeks of the receipt of the tissue. A preliminary discussion of the findings and the therapeutic implications can be discussed with your oncologist, usually in a matter of 3-4 weeks.

For More Information contact:

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