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LICENSING OPPORTUNITIES

Fondazione IRCCS
Istituto Nazionale dei Tumori

Sistema Socio Sanitario
Regione Lombardia

# RAPID HISTOLOGICAL DIAGNOSIS FOR ONCOLOGY THERAPY

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Applications:
- tailored therapy
- method for diagnosing a tumor
- immunohistochemical (IHC) analysis

Key benefits:
- tumor diagnosis for specific and tailored therapy
- Hematoxylin and Eosin (H&E) analysis are carried out during a routinary intraoperative examination
- reduce time and provide a definitive molecular diagnosis

Offer:
- Licensing out
- Co-Development

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# RAPID HISTOLOGICAL DIAGNOSIS FOR ONCOLOGY THERAPY

INVENTION
The invention concerns a rapid method for diagnosing a tumor, comprising the step of performing an IHC analysis, wherein said IHC is carried out on fresh frozen samples, in a microfluidic staining device and with a panel of antibodies.

BACKGROUND
The precise molecular map of each neoplasm deserves an adequate treatment. The worst clinical scenario is defined by late stage oncological disease, associated with metastatic diffusion. In this situation proper therapeutic approach could be driven by the precise tumor phenotype. It is crucial to identify other specific variants that benefit from targeted drugs. Morphological information obtained from routine slides must be integrated with immunohistochemical IHC analysis.
Pathology Unit plays a key role where a prompt diagnosis is crucial for the choice of the best therapeutic approach. A sample must be fixed in formalin and embedded in paraffin, in order to be morphologically evaluated, before IHC staining can be performed. This requires at least a further day ranges from 10 days for bioptic samples to more than 20 for histological ones. Overall, making a complex diagnosis can take up to 12-20 days. In cases when molecular diagnostic studies are required up to 20 days.

TECHNOLOGY

The problem underlying the invention is that of making available an improved method for tumor diagnosis which allows to reduce time and provide a definitive molecular diagnosis for treating the patient in the most effective and efficient manner.
The method of the invention allows to define whether the tumor is benign or malignant: using first the morphological examination on the H&E staining obtained from the first frozen section identify the tumor type by using the best combination of IHC stainings with the aforesaid set of antibodies to provide the information required for the diagnosis. In a second aspect, the invention relates to a kit for IHC analysis comprising a panel of such antibodies, comprising instructions for use in the method.
In a third aspect, the invention relates to the use of the aforementioned kit for providing a tumor diagnosis, wherein said tumor is chosen from the group consisting of breast, liver, testis, prostate, skin (melanoma), lung, thyroid, colon, colorectal, uterus, lymph node, bladder, pancreas, spleen, upper aerodigestive tract and stomach.

INVENTOR
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INTELLECTUAL PROPERTY RIGHTS
Patent Application filed in Europe.
100% Ownership of INT

OFFER
Licensing out & co-development.

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