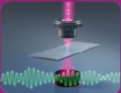


# T U R

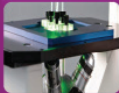
## LN-oC

The EU-funded Tumor-LN-oC project is developing a tumor-lymph node on-chip platform which will mimic the tumor microenvironment and its connection to the lymphatic system. The multidisciplinary microfluidic platform will make it possible to monitor the lymph node metastasis process, characterise signalling cues facilitating such metastasis, and identify spectral and molecular signatures in metastasizing cells. This makes Tumor-LN-oC a breakthrough innovation in metastasis diagnosis and drug testing.

### Individual platforms



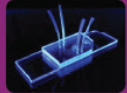
### System Integration



### Preclinical Validation



### Exploitation



## OBJECTIVES

Generate a Tumor-LN-oC multidisciplinary microfluidic platform, optimized for tumor cell and lymph culture and enabling the study of their crosstalk

Monitor in real time the cell migration with a beyond state-of-the-art micro-optics module and an advanced image analysis platform

Integrate Quantum Cascade Lasers (QCL) based mid-IR photothermal (MIP) spectroscopy for specific chemical signatures

Molecularly characterize migrating tumor-derived cells attracted to the LN, and the soluble signals driving migration

Integrate all Tumor-LN-oC technologies in an automated platform prototype incorporating interfaces compatible with existing laboratory equipment

Validate the Tumor-LN-oC platform with real lung cancer patient samples

Establish regulatory pathways and assure compliance with regulatory requirements for exploitation and early market entry

## BASIC FACTS

**Title** Tumor and Lymph Node on Chip for cancer studies

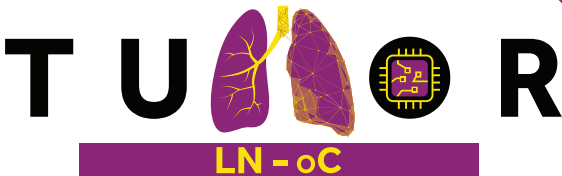
**Acronym** Tumor-LN-oC

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## WHO WE ARE



[www.tumor-ln-oc.eu](http://www.tumor-ln-oc.eu)

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