



NANOPHOTONICS FOR PRECISION MEDICINE: THE HOSPITAL IN THE NEEDLE AND THE EPIDURAL NEEDLE

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Precision Medicine

1. Customized Drugs

2. Low Invasivity Theranostics



WE SHOULD GET OUR DREAM

The Hospital in the needle

Clinical and biochemical analysis

Drug delivery

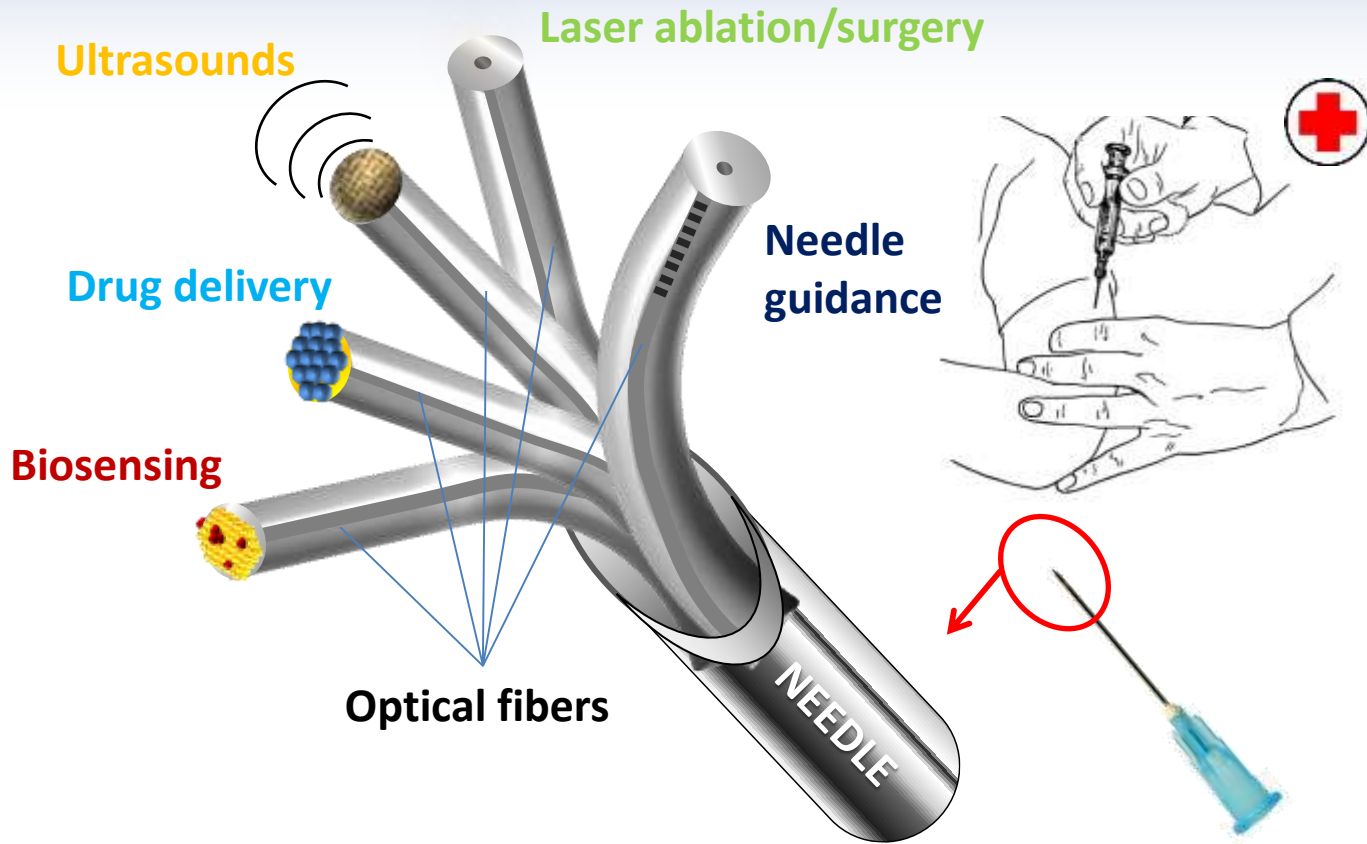
Surgery

Image Diagnostics

Anesthesia

HOW?????

THE SENSORIZED NEEDLE





C-NOS Project



Nanophotonics and Optoelectronics Center for Human Health «EMILIA»

Scientific Coordinator: Prof. Antonello Cutolo Technical Director: Prof. Andrea Cusano

Executive Decree n. 353 of 05/06/2017 - General Directorate for University, Research and Innovation - Campania Region - Total

The mission The CNOS center is a Research Infrastructure (IR) with a high technological and scientific potential capable of communicating with the most qualified national and international research structures in the field of nanophotonics and optoelectronics for the fight against oncological diseases, with the specific task of produce research of excellence and technological innovation. **The CNOS infrastructure, consisting of about 3000 square meters of laboratories and service spaces, aims to become an IR with a high technological and scientific potential, capable of promoting and governing scientific quality and technological quality.**



Location 1: C.da Piano



Location 2: Ex Guidoni



Location 3: Industrial

beneficio **beneficio** zone (bn)

1. The powerful and promising **enabling technologies selected**,
2. an **integrated laboratory** with cutting-edge technologies,
3. a **multidisciplinary staff** of top-level researchers ...

... will allow the development of **new technological platforms for the fight against oncological pathologies**, for precision medicine, for regenerative medicine, and for various application fields of primary importance (side effect).



The main facilities



The expected impacts

- **Transferring and transferring new knowledge** into vertical applications.
- **Piloting the technological transfer** of research products to companies / industrial realities.
- Guarantee the **training** of highly specialized personnel.
- Encourage and support the birth and incubation of **innovative "start-ups"**.
- Support companies and industries through **dedicated Technological Service**.
- Generate **intellectual property** (through patents) in close connection with the Campania Region.

These actions will generate financial flows towards the Research Infrastructure, with a view to ensuring long-term economic and financial self-sustainability.

Laboratories

