Postdoctoral announcement "Ethics of care and algorithmic healthcare" at the Research Center for the History of Ideas (Université Côte d'Azur)

A 2-and-a-half-year (December 2022 or January 2023 to March 2025) postdoctoral position in ethics is available as part of the European project MIRACLE, which focuses on healthcare algorithms in lung cancer recurrence (see scientific summary below). This multidisciplinary project is a European collaboration between Italy, France, Germany and Spain.

Université Côte d'Azur coordinates axis 6 of the project, which focuses on ethical issues, under the leadership of Vanessa Nurock (CRHI).

More specifically, the goal is to embed in the project an "ethics by design" that operates at each stage of the project and addresses more than just its outcomes, by bringing together the ethics and policies of care to study various problems, focusing mainly on three questions:

- What is a doctor? The potential changes in the role of doctors with the integration of algorithms in the practice of medicine
- What is responsibility? The evolution of responsibility with these new medical practices and especially issues related to data (medical and algorithmic)
- What is a patient? The opportunities to further integrate patients and organizations into this research project from the very beginning.

The postdoctoral student recruited for this position will have a strong background in ethics, in particular the ethics and policies of care, and an ability to fit into an international multidisciplinary team working on medical and algorithmic issues, that is, at the intersection of biomedical ethics and AI. Good interpersonal skills will also be required, to interact with patients and patient organizations.

Since the project is international, in addition to French, fluency in written and oral English is essential, and knowledge of Italian or German (or both) would be a big plus. The position is based in Nice and will require regular travel to the European countries involved in the project.

This is a postdoctoral position, so the candidate must have completed or be about to complete his or her doctorate.

Duties:

- Perform research as part of the project on the ethics of healthcare algorithms and the ethics of care in the specific context of the project: bibliographic, conceptual and field work
- Produce publications in scientific journals and co-organize scientific symposia
- Liaise with teams and patient organizations (interviews, presentations, dissemination work)
- Co-supervise master's students
- Prepare reports
- Maintain and monitor digital software
Core competencies sought:
- Proficiency in bibliographic research
- Ability to analyze and synthesize
- Openness to interdisciplinary collaboration and the ability to work in a team
- Research autonomy and a desire to produce new frameworks of thinking
- Ability to travel (several trips per year) and the capacity to work in several languages: English mandatory and if possible Italian (or the desire to learn enough to understand it a little) in addition to French.

Applications:
Send to Vanessa Nurock  vanessa.nurock@univ-cotedazur.fr
-CV & Cover Letter
-2 articles
-2 letters of recommendation

Scientific summary of the project
Early-stage non small cell lung cancer (ES-NSCLC) represents 20-30% of all NSCLC and is characterized by a high survival rate after surgery. However, there is variability in clinical outcomes among patients sharing the same disease stage, suggesting that other factors could determine the risk of relapse. Accurate and validated tools to stratify patients according to their risk of relapse are still lacking. **Hypothesis:** We hypothesize that multiple factors could influence the prognosis of resected ES-NSCLC patients. In particular, tumor tissue and microenvironment (TME) characteristics, liquid biopsy, radiomics features and clinical-pathological factors could all be involved. **Aims:** Primary: Development of a machine learning (ML) algorithm acting as a clinical decision support tool for disease free survival (DFS) prediction and patient stratification based on joint analysis of biological, clinical and radiologic features on a training cohort of resected ES-NSCLC. Secondary: Validation of the developed algorithm on an independent cohort. **Methods:** A previously prospectively collected cohort of 220 ES-NSCLC patients will be considered as a training set. Tumor tissue and TME characteristics will be analyzed using DNA and RNA sequencing approaches; liquid biopsy will be used to assess free circulating DNA and extracellular vesicles; radiomics parameters will be retrieved from computed tomography images. All these features, together with clinico-pathological factors, will be integrated in a model that will enable personalized patient treatment. The developed algorithm will be validated in a prospective cohort enrolled during MIRACLE. **Expected results and potential impact:** We expect to develop and validate a practical solution for an algorithm for DFS prediction to identify resected ES-NSCLC patients with different risk of relapse. This algorithm could be useful to improve patient management and establish more efficient and ethical therapeutic strategies.