Netzwerk
Genomische Medizin
Lungenkrebs

Project description:

Network Genomic Medicine ROS1 research group

The **Network Genomic Medicine** (NGM) Lung Cancer was founded in March 2010 by the Lung Cancer Group Cologne and the Institute of Pathology at the **Centre for Integrated Oncology** (CIO) at the **University Hospital of Cologne**.

Its primary goal is to offer **comprehensive and high quality molecular diagnostics** to **all patients with lung cancer** and thus promote the implementation of **personalised treatment** in routine clinical care.

The underlying philosophy of the Network Genomic Medicine is to **carry out comprehensive diagnostics** to clarify all aspects of potential treatment decisions **for all patients** with malignant lung tumours that cannot be cured with surgery.

For this, **tumour tissue** is tested for all **molecular changes** that are currently or could in the future be relevant for treatment. This testing is carried out centrally at the University Hospital of Cologne Institute of Pathology. Subsequent **treatment** is then **decentralised to hospitals and specialist medical practices**, so that patients can benefit from state of the art medicine **close to their homes**.

We also try to offer our patients a suitable **clinical trial** with a new drug if a mutation is found for which there is currently no authorised drug-based treatment.

Driver mutations and lung cancer

As our understanding of the molecular foundations of cancer has grown, it has become clear that the currently established forms of lung cancer consist of numerous further subgroups. These subgroups are characterised by molecular changes (mutations, transformations, amplifications, etc.). As these changes are responsible for the malignant growth of tumour cells, they are also called **driver mutations**. More and more of these driver mutations are being discovered, facilitating **targeted treatment** that is more efficient and better tolerated than conventional chemotherapy.

Patients who receive targeted treatment have a **survival prognosis of over five years**, corresponding to an increase of more than four years when compared with chemotherapy.

ROS1

Translocations of the ROS1 gene in lung cancer are **very rare** (1%) and occur almost exclusively in non-smokers. ROS1 cancer tends to spread to the brain and bones. **The precise mechanism of the degeneration potential of ROS1 has not yet been fully established**. The inhibitor crizotinib (Xalkori) is the only drug authorised for use in patients with ROS1 translocations. Tumours with ROS1 translocations respond very well to this drug, but develop resistance after 1-2 years of treatment. The precise mechanisms of how this resistance develops **are not yet fully known**. Removing tumour tissue in cases of such resistance can give information on whether the mechanisms at play can be overcome with targeted drugs.

Patients with ROS1 are generally much younger than typical lung cancer patients - many are middle-aged at the time of diagnosis. Most can continue their normal lives if treated with a targeted drug. Unfortunately, at present there are no authorised targeted treatments or suitable clinical trials in Germany available to patients who show resistance. We want to change this.

Donate

Patients with ROS1 across the world want the same thing: to improve their prognosis, life expectancy and quality of life.

This is why a new research group at the University of Cologne, headed by Prof. Jürgen Wolf and Dr. Matthias Scheffler, focussing in particular on ROS1 translocation, is needed. We want to improve our understanding of how this disease begins, progresses and develops resistance to treatment. We want to facilitate access to known and effective treatments that are not yet authorised and accelerate the testing of new treatments. We want to make cancer with ROS1 gene modifications a controllable chronic disease.

If you want to help finance this research, please donate to:

	Uniklinik Köln
	Bank für Sozialwirtschaft
IBAN:	DE04 3702 0500 000 8150000
BIC:	BFSWDE33XXX
Reference:	3625 0086 41 / Netzwerk Genomische Medizin Lungenkrebs / ROS 1
	+ Donor's address

To receive a donation receipt, please include your full name and address in the reference.

Contact details:
Network Genomic Medicine, University Hospital of Cologne, Kerpenerstr. 62, 50937 Cologne, Tel.: +49(0)221 47896532

Contact person:

NGM contact:	Prof. Jürgen Wolf (juergen.wolf@uk-koeln.de)
Medical contact person:	Dr Matthias Scheffler (matthias.scheffler@uk-koeln.de)
Coordination:	Juliane Süptitz (juliane.sueptitz@uk-koeln.de)
ROS1 patient representatives:	Bärbel Söhlke and Reiner Waldkirch (info@ros1-krebs.de)

www.ngm-cancer.com | www.nngm.de | http://ros1-krebs.de | https://ros1cancer.com | https://www.cio-koeln-bonn.de