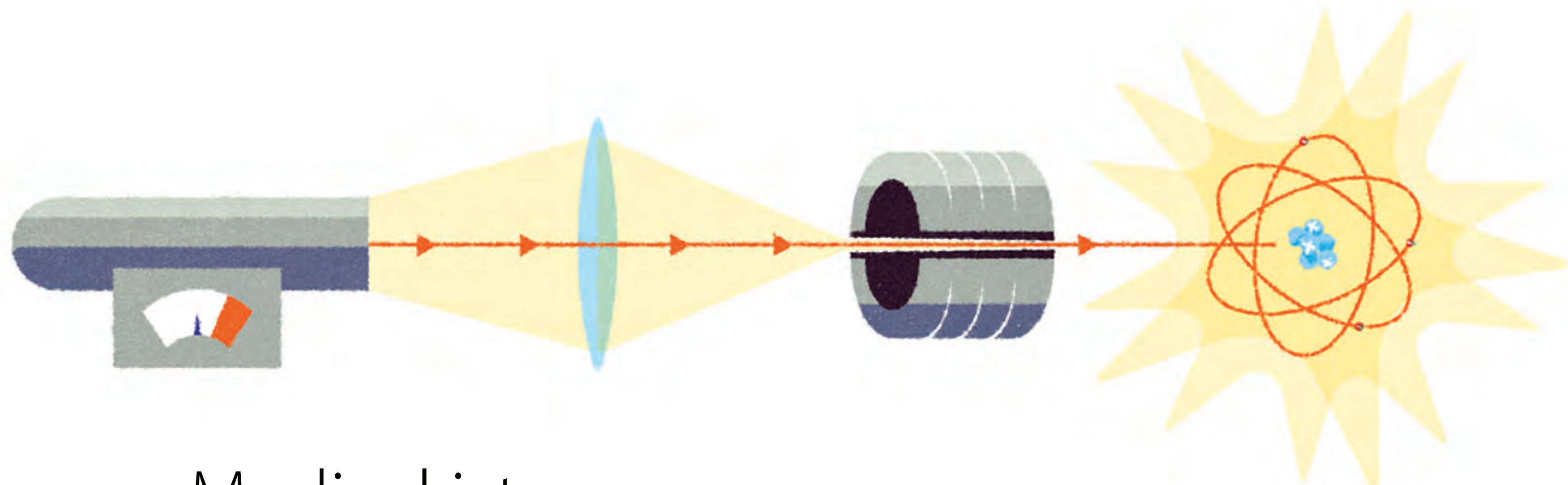




Dutch medical technology is going to change the world

The rapidly increasing cost of care demands pioneering technology. Innovations by Dutch companies and start-ups in the medical sector are so innovative that insiders believe they can radically change the medical sector. Rabobank Highlights takes a look at five of today's best ideas.



1 Medical isotopes without a nuclear reactor

WHO ASML in Veldhoven (global supplier of machines for the semiconductor industry)

INNOVATION Innovation: Medical isotopes are specific radioactive materials that can be used in health care for diagnostics, therapy and healing. Researchers at ASML discovered accidentally that you can use a high energetic electron beam to make medical isotopes. This discovery could have a major impact. In the foreseeable future, expensive and scarce nuclear reactors will no longer be needed to produce medical isotopes and nuclear waste will become a thing of the past.

Since this discovery does not fall under the core activities of ASML, a consortium of companies will be developing it further.

www.asml.com



2 Automatic image analysis, faster diagnosis

WHO Quantib in Rotterdam

(a spin-off company of Erasmus MC)

INNOVATION The development of software enabling automatic analysis of medical imaging data, such as MRI scans. Using a smart method that links innovative technology and algorithmic data from numerous healthy and sick people makes it possible to make a faster diagnosis, shorten the diagnosis process and reduce costs. This has pioneering consequences for medics such as radiologists and neurologists and, of course, for the people they treat.

www.quantib.com

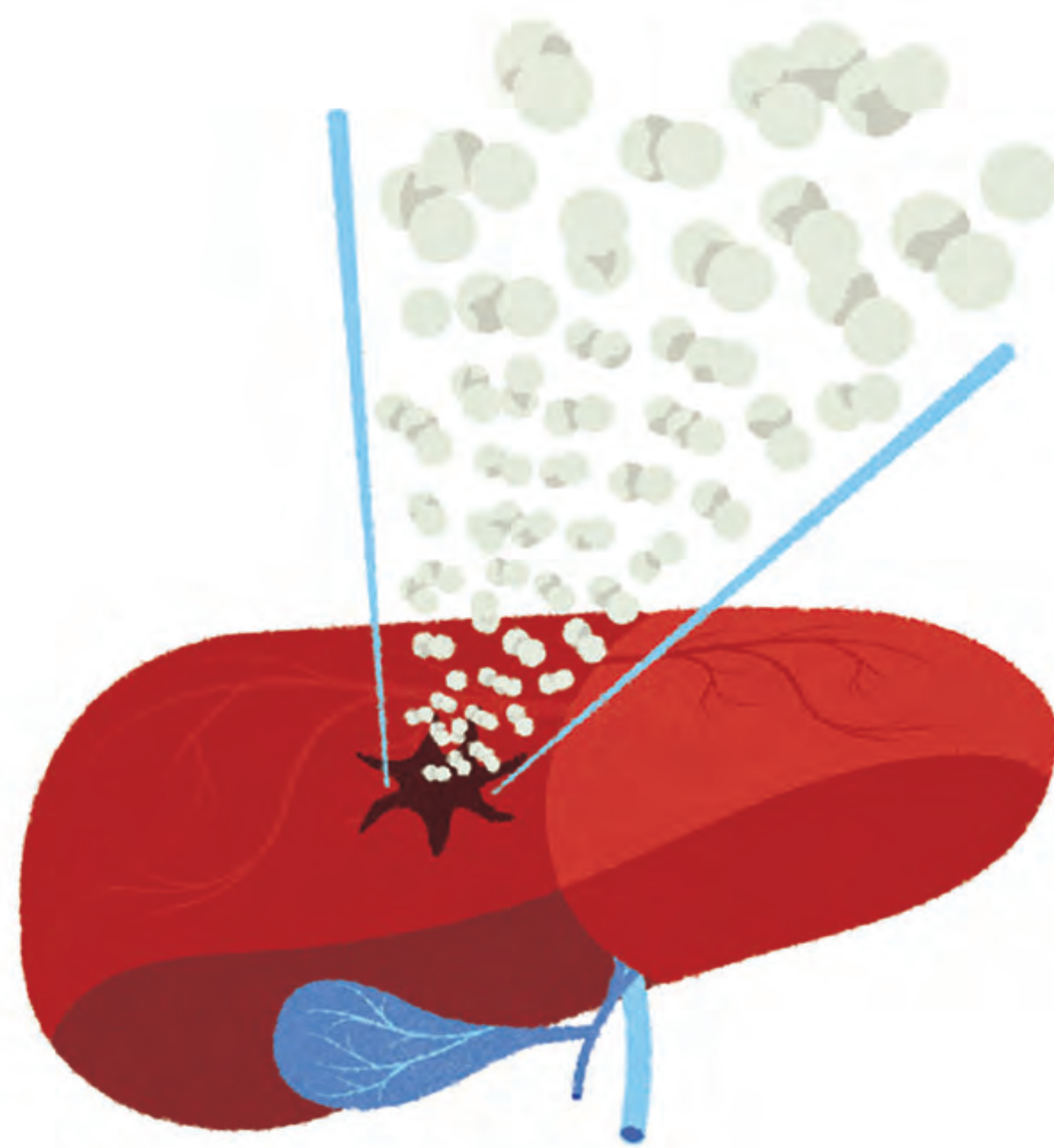
3 Tiny radioactive balls that can find tumours

WHO Quirem Medical in Deventer

(a spin-off company of UMC Utrecht)

INNOVATION Quirem Medical makes tiny balls with the radioactive material holmium that can be used to treat liver tumours. These tiny balls, QuiremSpheres, eventually collect in the blood vessels found in and around the liver tumours. The radiation they emit is accurately targeted at the tumour. Unlike with traditional forms of treatment for liver tumours, virtually no healthy tissue is affected during treatment.

www.quirem.com



4 Measuring blood sugar levels without a needle

WHO TNO in The Hague (independent research organisation)

INNOVATION A solution for measuring blood sugar levels without a needle in sight. TNO has developed innovative technology together with other parties, including the Dutch Diabetes Association. In this they use, among others, RAMAN spectroscopy: this is a method for measuring sugar levels through the skin using light. The challenge is now to develop a practical sensor and measuring device no larger than a smartphone.

www.tno.nl



5 An 'electronic nose' that can 'smell' certain diseases

WHO The eNose Company in Zutphen (originally an IT company)

INNOVATION The Aeonose is an 'electronic nose' that can measure organic substances in exhaled air and recognise breathing patterns that indicate a specific disease. The device can, for example, 'smell' TB or certain forms of cancer. The device is intended for screening and the measurements are used for further medical examinations if relevant.

www.enose.nl