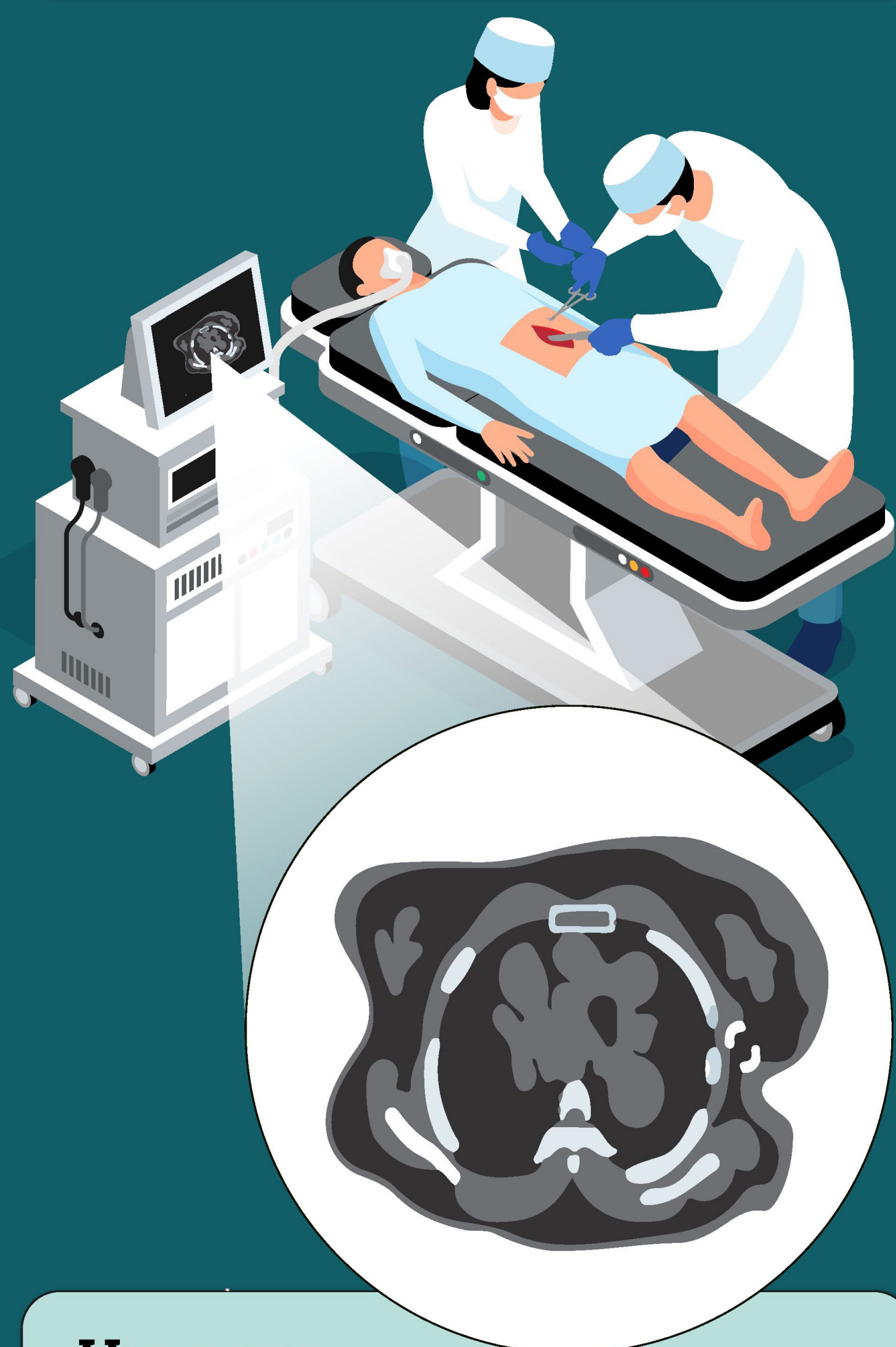


High-contrast Cell Endocytosis-activated Fluorescent Probe for Precision Surgery and Diagnostics

Chemical
Science

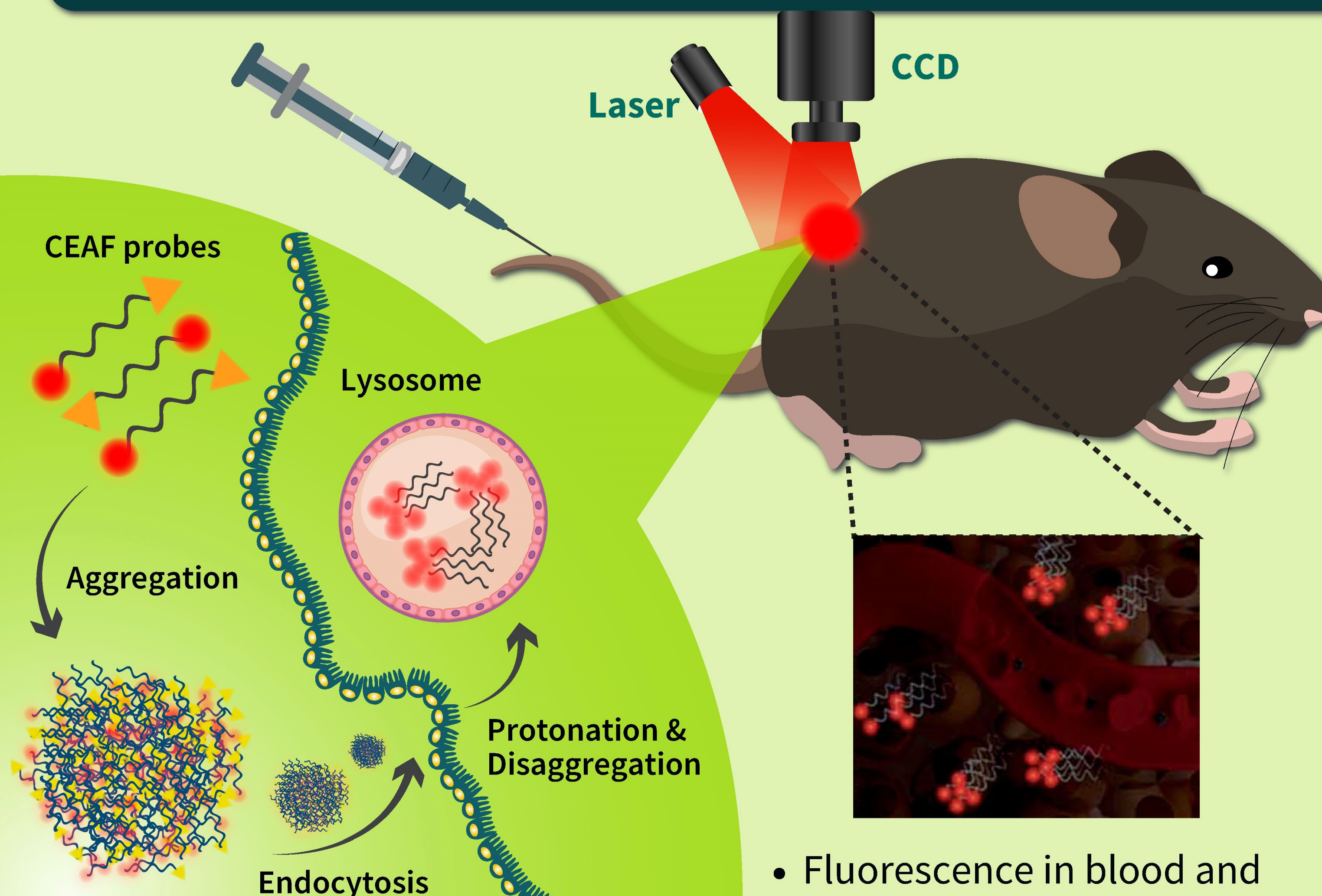


Fluorescent probes highlight disease sites in the body, aiding accurate diagnosis and image-guided surgery



However, current probes offer low contrast and sensitivity due to background signals from blood and normal tissues

Cell Endocytosis-activated Fluorescent (CEAF) probes are selectively activated by lysosomes in cancer cells



CEAF is activated in lysosomes by the combined action of

- non-covalent hydrophobic interactions
- acidic environment in cancer cells

- Fluorescence in blood and water greatly diminished
- Increased contrast measured by target-to-background ratios (TBR) of over 15
- Highly specific signals with up to 35 hours observation time

CEAF is a novel imaging probe providing high-contrast imaging for surgery and diagnostics