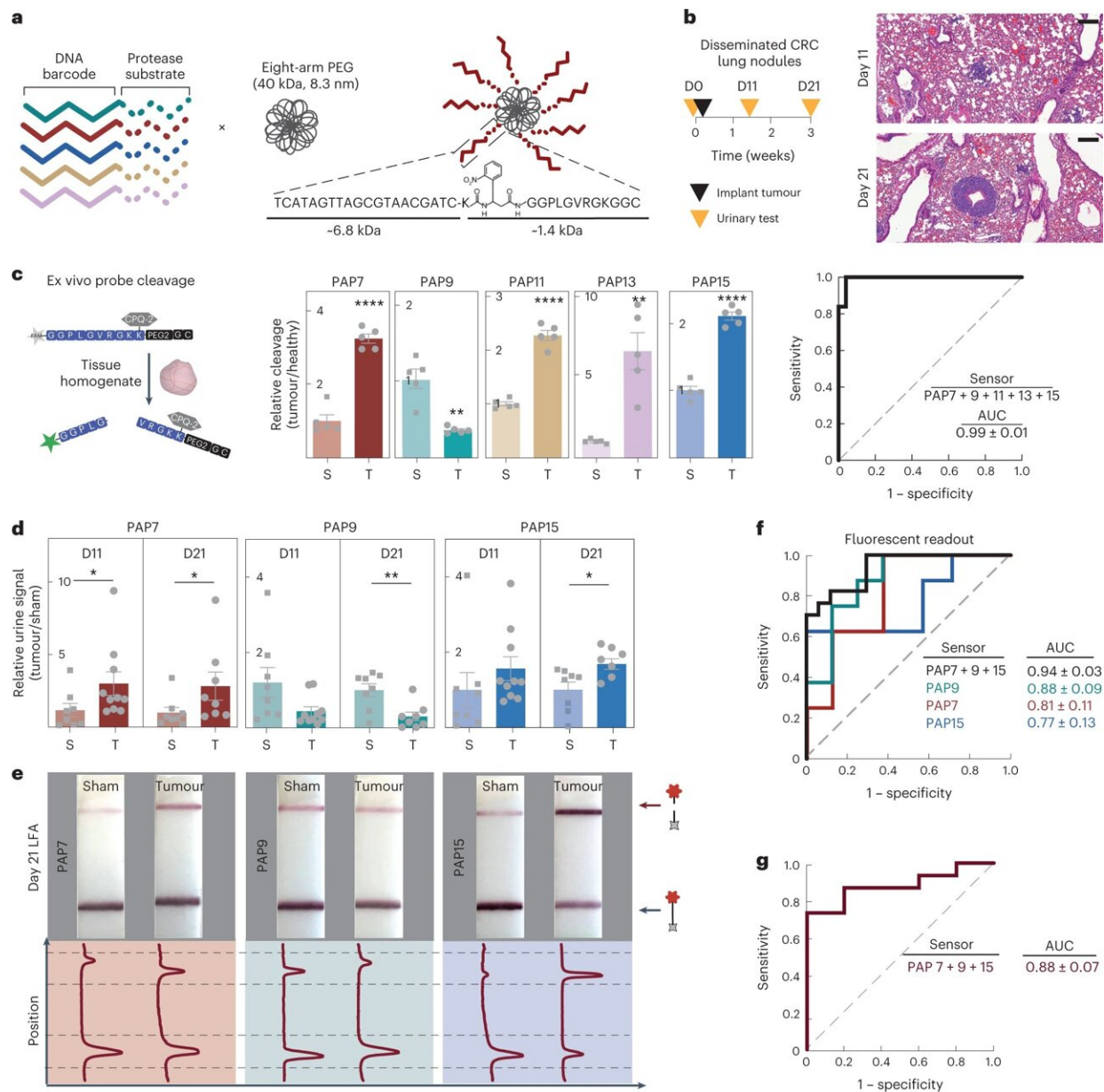


A simple paper test could offer early cancer diagnosis

April 25 2023, by Anne Trafton



Multiplexed DNA-encoded synthetic urine biomarkers for portable monitoring of invasive colorectal cancer. **a**, Multiplexed DNA-SUBs are comprised of a polymeric nanocarrier (eight-arm PEG) functionalized with protease-activated peptides barcoded with oligonucleotides. **b**, Left: Timeline of longitudinal tumor monitoring with DNA-SUB. D, day. Right: histological lung staining of BALB/c mice bearing CRC lung tumors at 11 days (upper) and 21 days (lower) after tumor inoculation. Scale bar, 200 μm . **c**, Left: Schematic of the fluorogenic assay to identify peptide substrates specifically cleaved by lung tissue homogenates collected 21 days after tumor inoculation. Middle: Peptide cleavage by CRC-bearing and healthy lung tissue homogenates were monitored and cleavage rates normalized to healthy tissue are shown in bar graphs ($n = 5$ mice per group; mean \pm s.e.m.; unpaired two-tailed t -test with Welch's correction, **** P

Citation: A simple paper test could offer early cancer diagnosis (2023, April 25) retrieved 21 June 2024 from <https://phys.org/news/2023-04-simple-paper-early-cancer-diagnosis.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.