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### ACCEPTED MANUSCRIPT

# Sensitive On-Chip Detection of Cancer Antigen 125 Using a DNA Aptamer/Carbon Nanotube Network Platform

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#### Highlights

- The ssDNA aptamer for cancer antigen 125 (CA125) was selected through SELEX.
- Specificity of aptamer to CA125 was validated using cell imaging and 3DN-CNT.
- Biochip platform showed much improved sensitivity than that of 2D or ELISA.

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