

CGA/16/35 – Toward liquid biopsies to monitor kidney diseases at point of care

We are proposing to demonstrate the 'proof of concept' for the detection of lipid nanoparticles (*exosomes* – important disease markers) in urine using single-use electronic sensors. The detection of *exosomes* has enormous potential in the management of kidney, heart and liver diseases, cancer and diabetes – especially if the test can be done anytime and anywhere (*point of care test*). We envisage the final test to be as simple to use as a pregnancy or blood glucose test. Our primary disease target is acute kidney injury, which causes an annual cost to the NHS of over £600m.