***Supplementary data***

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**Figure S1.** Size distribution of plasma EVs by nanoparticle tracking analysis.

**Table S1.** The sequences for lncRNAs primers and probes.

|  |  |  |  |
| --- | --- | --- | --- |
| Gene Name | Primer & Probe Sequence | length | Product length |
| LUADT1 | F: TTTCCGTTCAGCAAATCCACACR: TTAGGTCCAGCACTGTTATCCA FAM-ATCCTCTTACAGCAAATTTCCA- TAMRA | 222222 | 88 |
| MALAT1 | F: CAGACCACCACAGGTTTACAGR: AGACCATCCCAAAATGCTTCAFAM-AGAGCAGTTCTCACGTTGAG - TAMRA | 212120 | 187 |
| NEAT1 | F: GTTTCCAGTAGTATTTCCCTGR: CACGAACAAGCAGATGAAAGTFAM-GGCAGAGTTCACAAACACATT- TAMRA | 212121 | 175 |
| MIAT | F: CCATTGTTTTACTTTAACAGACCAGAAR: GACGCTCCTTTGTTGAATCCATFAM- ATTACCCCCAGGGGATACC - TAMRA | 272219 | 137 |
| HPRT1 | F: AGCCTAAGATGAGAGTTCR: CACAGAACTAGAACATTGATAFAM- CATCTGGAGTCCTATTGACATCGC -TAMRA | 182124 | 88 |

**Table S2.** The demographic and clinicopathological data of NSCLC samples

|  |  |
| --- | --- |
| Variable | Number |
| Gender N (%) | Female | 60 (39.2) |
| Male | 93 (60.8) |
| Mean age ± SD | 58.25 ± 13.07 |
| Subtype N (%) | Adenocarcinoma | 98(64.1) |
| Squamous cell carcinoma | 55 (35.9) |
| Stage N (%) | 1 | 32 (20.9) |
| 2 | 58 (37.9) |
| 3 | 63 (41.2) |
| Body mass index N (%) | <30 | 110 (71.9) |
| >30 | 43 (28.1) |
| Smoking |  | 31 (20.3) |

**Table S3.** Characterization of EV particle diameter

|  |
| --- |
| Sample ADC SQCC |
| Average of particle diameter (nm) | 118.8 | 122.3 |
| Polydispersity index (PDI)a | 0.218 | 0.224 |
| Major peak of particle diameter (nm) | 153.6 | 166.3 |
| Percentage of 20–200 nm diameter (%) | 78.1 | 78.8 |

ADC adenocarcinoma, SQCC squamous cell carcinoma

a Polydispersity index (PDI) is a dimensionless value that represents the distribution of particle size. PDI values of 0.08–0.7 indicate moderate dispersion system and optimum application scope of algorithm