

Electronic Supplementary Table 1 Clinical information of included patients

No.	JBUI	Age	Sex	Histological type	AJCC TNM (8 th Ed.)	ISUP-grade	T diameter (cm)	Necrosis (path. finding)
Pt. 1	6522	52	female	clear cell RCC	pT3Nx	2	7.4	No
Pt. 2	7062	76	male	clear cell RCC	pT3aNx	3	13.5	Yes
Pt. 3	6577	75	female	clear cell RCC sarcomatoid diff. in 20% and focal rhabdoid features	pT4N0	4	17	Yes
Pt. 4	7089	74	male	clear cell RCC sarcomatoid diff. in 20%	pT3aN0	4	9.6	Yes

Electronic Supplementary Table 2 Reagents and materials used for EV isolation, NanoFCM, Western blotting, and TEM

Materials used for EV Isolation	Company	Catalog no.
PBS pH 7.4	Gibco	1001-023
DMEM	Gibco	11995-065
Collagenase D	Roche	11088882001
Dnase I	Roche	11284932001
Tissue Culture Dish, 100x20 mm	Falcon	353003
70 µm Cell-Strainer, Nylon	Falcon	352350
Acrodisc® 25 mm Syringe Filter w/ 0.8 µm Supor® Membrane	PALL	4618
30 mL Syringe w/ Luer-Lok™ tip	BD	302832
Acrodisc® 25 mm Syringe Filter w/ 0.45 µm Supor® Membrane	PALL	4614
20 mL Syringe w/ Luer-Lok™ tip	BD	302830
Optima™ LE-80k ultracentrifuge	Beckman Coulter	LE-80k
Type 70 Ti Fixed-Angle rotor	Beckman Coulter	Type 70 Ti
OptiSeal™ Polypropylene tubes	Beckman Coulter	361625
25 mm diameter Ultem Tube Spacer	Beckman Coulter	361669
Materials used for NanoFCM	Company	Catalog no.
UltraPure™ Distilled Water	Invitrogen	10977-015
Sodium Hydroxide solution (10N/certified)	Fisher Scientific	SS255-1
Counting Standard Nanospheres™	NanoFCM	S08210
Silica Nanospheres™ Cocktail #1	NanoFCM	S16M-Exo
Materials used for Western blot	Company	Catalog no.
Mem-PER™ Plus Membrane Protein Extraction Kit	Thermo Scientific	89842
Halt™ Protease and Phosphatase Inhibitor Cocktail (100X)	Thermo Scientific	78442
RIPA Buffer (10X)	Cell Signaling Technology	9806
Pierce™ BCA Protein Assay Kit	Thermo Scientific	23225
Medisorp™ Clear Flat-Bottom Immuno Nonsterile 96-Well Plates	Thermo Scientific	467320
SealPlate® Sealing Film, Nonsterile	Excel Scientific	T-3021-7

4x Laemmli Sample Buffer	Bio-Rad	1610747
Mini-PROTEAN® Tetra Vertical Electrophoresis Cell	Bio-Rad	1658005
12% Mini-PROTEAN® TGX Stain-Free™ Protein Gels, 10 well, 50 µl	Bio-Rad	4568044
Chameleon® Duo Pre-stained Protein Ladder	LI-COR Biosciences	928-60000
Trans-Blot® Turbo™ Transfer System	Bio-Rad	1704150
Trans-Blot® Turbo™ Mini Nitrocellulose Transfer Packs	Bio-Rad	1704158
Casein Blocking Buffer 10x	Sigma-Aldrich	B6429
anti-Calnexin, Rabbit polyclonal	Abcam	ab22595
anti-Flotillin 1, Rabbit monoclonal [EPR6041]	Abcam	ab133497
anti-CD63, Mouse monoclonal [Ts63]	ThermoFisher Scientific	10628D
anti-CD81, Mouse monoclonal [1.3.3.22]	Santa Cruz Biotechnology	sc-7637
anti-GAPDH, Rabbit monoclonal [14c10]	Cell Signaling Technology	2118
10x TBS pH 7.4	Quality Biological	351086131
TWEEN® 20	Sigma-Aldrich	P7949
IRDye® 800CW Goat anti-Rabbit IgG (H + L)	LI-COR Biosciences	926-32211
IRDye® 680RD Goat anti-Mouse IgG (H + L)	LI-COR Biosciences	926-68070
Odyssey® 9120 Imaging System	LI-COR Biosciences	9120
Materials used for TEM	Company	Catalog no.
Carbon coated copper mesh grids	EMS	CF400-CU-UL
GloQube® Plus Glow Discharge System	EMS	EMS-Glo-2
Uranyl Acetate	EMS	22400
Tylose® MH 300	Sigma-Aldrich	93802
Phillips CM-120 transmission electron microscope	Philips	Phillips CM-120