

Table S1. Age, sex, exosome concentrations in the urine and observations at TURBT.

Code	No. exosomes per ml x10 ⁸	sex	age	information from TURBT
V4	35.5	M	57	recurrence
V40	55.5	M	68	recurrence
V47	51.3	M	87	recurrence
B2	482.3	M	82	2cm tcc
B3	90.5	F	40	Tiny tumour 3mm
B4	25.3	F	72	red patch - flat 3cm
B5	108.1	M	75	multiple small tcc and red patch
B7	73.9	M	92	5cm tumour at dome
B8	28.5	F	90	5mm tcc
B9	190.1	F	66	multifocal recurrence . Largest 3cm
B10	326.4	M	70	1cm
B12	99.1	M	75	8cm
B13	77.2	M	84	2cm
B14	79.2	F	94	Red patch - biopsied 2cm
B15	113.3	M	86	5mm tcc
L1	127.8	M	86	Multifocal papillary looking tumours
L2	56.4	F	77	Solid looking mucosa right lateral wall (G2pTa previously)
L4	26.1	F	86	Multifocal papillary looking tumours
L5	82.1	M	86	Known G3pT1 TCC
L6	87.9	M	83	New Dx of single papillary tumour
L12	119.5	F	74	New Dx of TCC
L13	30.1	M	48	Check cysto (G3pT1)
L15	116.7	M	77	Multifocal papillary looking tumours
L18	65.8	M	83	Multifocal papillary looking tumours
L21	67.4	M	87	Recurrence G3pT1 papillary
L22	41.8	F	82	Recurrence of small cell bladder cancer?
L23	285	M	78	New Dx of bladder tumour
L24	66.8	M	65	Recurrence of G1 pTa
P25	55.6	M	73	Single papillary recurrence
L27	93.2	M	72	Known G2/3 pTa (definite tumour)
L30	52.2	M	69	New Dx solid multifocal
L31	48	M	64	New Dx papillary left lateral wall
L32	105.2	F	77	New Dx papillary right lateral wall
L40	42.8	F	75	2cm papillary lesion above R. U.O.
L41	33.6	M	53	Papillary lesion in prostatic urethra
L44	277.6	M	70	New Dx large papillary lesion right side
L45	404.6	M	67	New lesion anterior wall of bladder - solid

Table S2. Age, sex, exosome concentrations in the urine, cystoscopy findings of patients presenting for check cystoscopy and found not to have a recurrence of their bladder tumor.

	B	C	D	F	G	
1	CODE	SEX	AGE	CYSTOSCOPY FINDINGS	STATUS	NO. EXOSOMES PER ML x10 ⁸
2	V2	M	66	NO RECURRENCE, URINALYSIS - NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1/G2 PTA 2007, RECURRENCE 2008, 2010.	20.4
3	V3	M	75	NO RECURRENCE, URINALYSIS - TRACE KETONES, TRACE PROTEIN	CHECK CYSTOSCOPY, PREVIOUS TCC G3 PT1 SINCE 2005.	38.8
4	V5	F	72	NO RECURRENCE, URINALYSIS - NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PT1 BLADDER, TCC RIGHT RENAL PELVIS.	46.5
5	V6	M	72	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G2 PTA 2002, LAST RECURRENCE 2004.	94.1
6	V7	F	53	NO RECURRENCE, URINALYSIS - NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS G1 PTA 1996, LAST RECURRENCE 05/2010.	83.7
7	V8	M	61	NO EVIDENCE OF TUMOUR, URINALYSIS - TRACE BLOOD.	NEW PATIENT, MICROSCOPIC HAEMATURIA.	49
8	V9	M	63	NO RECURRENCE, URINALYSIS - + VE NITRITES.	CHECK CYSTOSCOPY PREVIOUS TCC G2 PTA 05/2010, NO RECURRENCES	38.4
9	V10	M	84	NO EVIDENCE OF TUMOUR, URINALYSIS - TRACE OF BLOOD, +KETONES.	NEW PATIENT, IRRITATIVE BOTHERSOME URINARY SYMPTOMS.	69.1
10	V11	M	83	NO RECURRENCE, URINALYSIS GLUCOSE 2+, NITRITE +VE, TRACE KETONES.	CHECK CYSTOSCOPY PREVIOUS TCC G2 PTA 02/2007, LAST RECURRENCE 11/2008.	34.9
11	V12	F	42	NO RECURRENCE, URINALYSIS - TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS FLEXI AND HISTORY FRANK HAEMATURIA.	39.9
12	V13	M	79	NO RECURRENCE, URINALYSIS - TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G3 PTA 2007, NO RECURRENCES.	33.6
13	V14	M	85	NO RECURRENCE, URINALYSIS - TRACE LEUCOCYTES.	CHECK CYSTOSCOPY PREVIOUS G2 PTA 02/2011, NO RECURRENCES.	25.9
14	V15	M	68	NO RECURRENCE, INFLAMMED AREA TO DOME, URINALYSIS - NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS G2 PTA 2000, LAST RECURRENCE 12/2010.	36.8

15	V16	F	54	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G3 PTA 01/2009, LAST RECURRENCE 06/2011.	23.6
16	V17	F	81	NO RECURRENCE, URINALYSIS - TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G1/G2 PTA 2005, LAST RECURRENCE 06/2008.	7.3
17	V18	F	73	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2 PTA 2010, NO RECURRENCES.	33
18	V19	M	67	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CTSTOSCOPY, PREVIOUS TCC G1/G2 PTA 02/2011, NO RECURRENCES.	26.7
19	V20	M	78	NO RECURRENCE, URINALYSIS TRACE LEUCOCYTES.	CHECK CYSTOSCOPY, PREVIOUS TCC G1 PTA 1997, RECURRENCE 06/2011.	42.1
20	V21	M	58	NO RECURRENCE, URINALYSIS TRACE KETONES.	CHECK CYSTOSCOPY, PREVIOUS TCC G2 PTA 2006, RECURRENCE 10/2010 G2/3PTA.	40.6
21	V22	F	75	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1/G2 PTA, MULTIPLE RECURRENCES, 01/11.	74.9
22	V23	M	68	NO RECURRENCE, URINALYSIS PROTEIN 1+,TRACE BLOOD AND GLUCOSE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2 PTA 02/2011 TURBT 03/2011.	29.4
23	V31A	M	65	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY,PREVIOUS TCC LEFT LOWER URETER G2PTA 2011,NO RECURRENCES.	43.9
24	V32	M	66	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 12/2010, NO RECURRENCES.	37.8
25	V33	F	80	NO RECURRENCE, URINALYSIS TRACE PROTEIN	CHECK CYSTOSCOPY, PREVIOUS G2PTA 05/2011, NO RECURRENCES.	25.7
26	V34	F	70	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1 PTA 2007, RECURRENCE 07/2011.	54.5
27	V35	M	82	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA, NO RECURRENCES.	54.6
28	V36	F	77	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2003, NO RECURRENCES.	34.7
29	V37	M	81	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1PTA 2001, CIS 11/2009,INTRAVESICAL BCG 03/2010.	55.1
30	V38	M	44	NO RECURRENCE, URINALYSIS TRACE BLOOD, PROTEIN.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PT1 04/2007.	51.5

31	V39	F	67	NO RECURRENCE, URINALYSIS TRACE BLOOD, PROTEIN.	CHECK CYSTOACOPIY, PREVIOUS TCC G1PTA 2008, NO RECURRENCES.	85.1
33	V41	M	67	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2002, NO RECURRENCES.	36.7
34	V42	M	64	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC GIPTA 2003. LAST RECURRENCE 11/2008.	44.5
35	V43	F	80	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G3PT2 RIGHT RENAL PELVIS 11/2009, NO RECURRENCES.	22.1
36	V44	M	85	NO RECURRENCE, URINALYSIS GLUCOSE 2+, TRACE KETONES.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2009, RECURRENCE 05/2010	25
37	V45	M	77	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1/G2PTA SINCE 1997, LAST RECURRENCE 2006.	53.6
38	V46	M	53	NO RECURRENCE, URINALYSIS TRACE BLOOD, TRACE KETONES.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2007, NO RECURRENCES.	56.8
40	V48	M	71	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 1999, NO RECURRENCES.	55.2
41	V49	F	51	NO RECURRENCE, URINALYSIS GLUCOSE 4.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2002, G1PTA 2008 RECURRENCE.	54.2
42	V50	M	81	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G1PTA 2005, NO RECURRENCES.	58.1
43	V51	F	79	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2003, LAST RECURRENCE 2004.	27.6
44	V52	F	67	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS NEPHRO URETERECTOMY G2PT1 05/2001, G2PTA TCC BLADDER 2002.	33.2
45	V53	F	53	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS SUSPECTED TCC 2009, NO FORMATIVE DIAGNOSIS, NO RECURRENCES.	9.2
46	V54	M	72	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPT, PREVIOUS TCC G2PTA 03/2009, NO RECURRENCES.	30.9
47	V55	M	76	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS URETERECTOMY G1PTA 12/2008, FOCAL G2.	16.5
48	V57	F	88	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1/G2PTA 08/2011, NO RECURRENCES.	44

49	V58	F	79	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC BLADDER.	118.2
50	V59	M	65	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCCG1PTA 02/2011, NO RECURRENCES.	43.7
51	V60	F	84	NO RECURRENCE, URINALYSIS MODERATE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TTC BLADDER, SUPERFICIAL, NO DEFINITIVE DIAGNOSIS.	25.1
52	V61	F	61	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 03/2005, G1PTA RECURRENCE 2009.	35.7
53	V62	F	80	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G3PT1 2007, NO RECURRENCES.	20.7
54	V63	M	64	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 07/2011, NO RECURRENCES.	27.8
55	V64	M	67	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2009, NO RECURRENCES.	35.7
57	V66	M	57	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1PTA 2004, LAST RECURRENCE 05/2010.	13.9
58	V68	M	56	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 05/2011, LAST RECURRENCE 09/2011.	35.3
59	V69	F	83	NO RECURRENCE, URINALYSIS BLOOD 1.	CHECK CYSTOSCOPY, PREVIOUS TCC G1/G2 PTA 2007, LAST RECURRENCE 12/2011.	34
60	V70	M	58	NO RECURRENCE, URINALYSIS POSITIVE NITRITE, MSSU SENT.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2006, RECURRENCE G2/G3 PTA 10/2010.	47.9
61	V71	F	69	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PT1 08/2010, RE-RESECTION 09/2010.	91.7
62	V72	M	85	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 01/2003, NO RECURRENCES.	65.3
63	V73	M	64	NO RECURRENCE, URINALYSIS GLUCOSE 2, PROTEIN 1.	CHECK CYSTOSCOPY, PREVIOUS TCC G1PTA 2002, NO RECURRENCES.	39.5
64	V74	M	72	NO RECURRENCE, URINALYSIS POSITIVE NITRITES, MSSU SENT.	CHECK CYSTOSCOPY, PREVIOUS TCC G2/3 PTA, LAST RECURRENCE 04/2010.	28.5
65	V75	M	65	NO RECURRENCE, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 05/2010, NO RECURRENCES.	80.4

66	V76	M	59	NO RECURRENCES, URINALYSIS TRACE BLOOD.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 12/2009, NO RECURRENCES.	87.2
67	V77	F	62	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2007, LAST RECURRENCE 05/2009	33.6
68	V78	F	79	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G3PTA,CIS BCG.	91.9
69	V79	F	75	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 2007, 12/2009 RECURRENCE.	61
70	V80	M	89	NO RECURRENCE, URINALYSIS TRACE GLUCOSE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 03/2003, RECURRENCE G3 2007.	34.5
71	V81	F	78	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS RCC G3PTA G3PT3 TCC BLADDER NO RECURRENCES.	30.4
72	V82	M	76	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC BLADDER.	33.3
73	V84	F	92	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G1PTA 2007, NO RECURRENCES.	16
74	V85	M	88	NO RECURRENCE, URINALYSIS POSITIVE LEUCOCYTES.	CHECK CYSTOSCOPY, PREVIOUS TCC G3PTA 07/2009, NO RECURRENCES.	39.6
75	V87	F	77	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC G2PTA 03/2003 CA PROSTATE.	70.6
76	L7	M	65	NO RECURRENCE, URINALYSIS NEGATIVE.	CHECK CYSTOSCOPY, PREVIOUS TCC BLADDER.	53.9
79	L11	M	65	NO BLADDER TUMOUR	TURP PATIENT. NO EVIDENCE OF TCC.	41.8
81	L17	M	73	NO BLADDER TUMOUR	TURP PATIENT. NO EVIDENCE OF TCC.	35.7
82	L26	M	69	NO RECURRENCE, URINALYSIS NEGATIVE.	Known G3pT1 TCC & CIS (Treated with BCG)	30.5
83	L28	M	72	NO RECURRENCE, URINALYSIS NEGATIVE.	Known CIS (treated with BCG)	121.4
84	L29	F	79	NO RECURRENCE, URINALYSIS NEGATIVE.	Re-resection of G3pT1 - NO TUMOUR IDENTIFIED	77.4
85	L3	M	58	NORMAL LOOKING BLADDER	RANDOM BIOPSIES TAKEN	66.1
86	L8	M	81	NO RECURRENCE	KNOWN G2pTa - TCC	35.1