## Supplementary

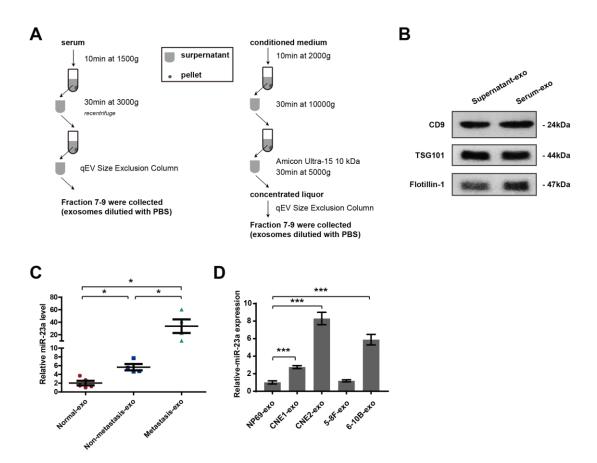
Patient	Stage	Yr. DX.	Age	Gender	Progression (No:1; pre-metastasis:2;
			DX.	DX.	metastasis: 3)
1	3	2006.06	18	М	2
2	3	2006.08	67	М	1
3	3	2006.09	48	М	1
4	4	2006.09	59	М	2
5	2	2006.10	44	М	1
6	4	2006.10	71	М	1
7	2	2006.10	57	М	1
8	1	2006.10	52	F	1
9	3	2006.10	30	М	1
10	2	2006.11	45	F	1
11	4	2006.11	48	М	2
12	3	2006.12	65	М	2
13	2	2006.12	34	М	1
14	2	2006.12	33	F	1
15	4	2006.12	25	М	1
16	2	2006.12	45	М	2
17	2	2006.12	38	М	1
18	2	2007.01	39	F	1
19	2	2007.01	57	М	1
20	4	2007.02	41	F	1
21	2	2007.02	75	М	1
22	4	2007.03	50	М	1
23	3	2007.03	30	F	2
24	3	2007.03	46	М	1
25	3	2007.03	49	М	2
26	2	2007.03	43	F	1
27	4	2007.03	38	М	1
28	2	2007.03	46	М	1
29	1	2007.03	32	F	1
30	2	2007.04	71	М	1
31	2	2007.04	70	М	1
32	2	2007.05	34	М	1
33	2	2007.05	39	М	1
34	3	2007.05	51	М	2
35	3	2007.05	72	М	2
36	3	2007.06	39	М	1

## Table S1. Clinical information of patients in the NPC study, related to Figure 1.

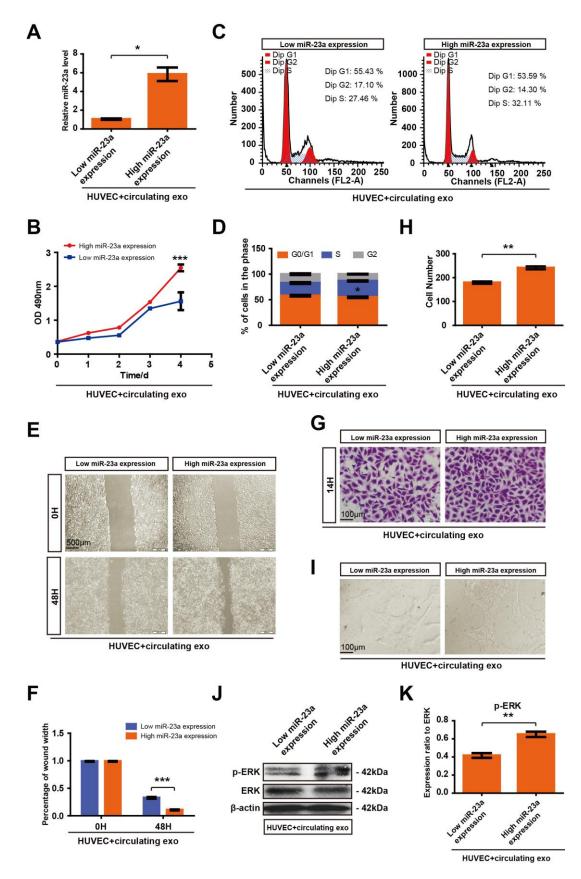
37         2         2007.05         53         F         1           38         3         2007.05         53         F         1           39         2         2007.05         53         F         2           40         3         2007.06         38         M         1           41         4         2007.06         50         M         1           42         4         2007.07         45         M         2           43         2         2007.07         45         M         1           44         2         2007.07         43         M         1           44         2         2007.07         65         M         2           46         3         2007.07         38         F         1           47         2         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         52         M         2           54         2         2007.10         33         M         1           55         4         2007.10 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>						
39         2         2007.05         39         F         2           40         3         2007.06         38         M         1           41         4         2007.06         50         M         1           42         4         2007.07         45         M         2           43         2         2007.07         40         M         1           44         2         2007.07         43         M         1           45         2         2007.07         65         M         2           46         3         2007.08         38         F         1           47         2         2007.08         51         F         1           48         2         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         33         M         1           56         1         2007.10 </td <td>37</td> <td>2</td> <td>2007.05</td> <td>46</td> <td>М</td> <td>1</td>	37	2	2007.05	46	М	1
40         3         2007.06         38         M         1           41         4         2007.06         50         M         1           42         4         2007.07         45         M         2           43         2         2007.07         40         M         1           44         2         2007.07         43         M         1           44         2         2007.07         65         M         2           46         3         2007.07         65         M         1           47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         52         F         1           56         1         2007.10 </td <td>38</td> <td>3</td> <td>2007.05</td> <td>53</td> <td>F</td> <td>1</td>	38	3	2007.05	53	F	1
4142007.0650M1 $42$ 42007.0745M2 $43$ 22007.0740M1 $44$ 22007.0743M1 $44$ 22007.0765M2 $46$ 32007.0738F1 $47$ 22007.0838M1 $48$ 22007.0851F1 $49$ 42007.0862M1 $50$ 22007.0951F1 $51$ 22007.0969M1 $52$ 32008.0344M1 $53$ 42007.0955F1 $54$ 22007.1046F1 $55$ 42007.1052M2 $54$ 22007.1052F1 $56$ 12007.1052M2 $59$ 32007.1052M2 $59$ 32007.1041M1 $61$ 22007.1153M2 $62$ 22007.1151M1 $64$ 32007.1252F1 $65$ 42007.1150M1 $66$ 42007.1150M1 $66$ 22007.1150M1 $66$ 22007.1154M <td>39</td> <td>2</td> <td>2007.05</td> <td>39</td> <td>F</td> <td>2</td>	39	2	2007.05	39	F	2
42         4         2007.07         45         M         2           43         2         2007.07         40         M         1           44         2         2007.07         43         M         1           44         2         2007.07         65         M         2           46         3         2007.07         38         F         1           47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.09         51         F         1           50         2         2007.09         69         M         1           51         2         2007.09         51         F         1           53         4         2007.09         35         F         1           55         4         2007.10         46         F         1           56         1         2007.10         52         M         2           59         3         2007.10         52         M         2           59         3         2007.10 </td <td>40</td> <td>3</td> <td>2007.06</td> <td>38</td> <td>М</td> <td>1</td>	40	3	2007.06	38	М	1
43         2         2007.07         40         M         1           44         2         2007.07         43         M         1           45         2         2007.07         65         M         2           46         3         2007.07         38         F         1           47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.09         51         F         1           50         2         2007.09         69         M         1           51         2         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         46         F         1           56         1         2007.10         52         M         2           59         3         2007.10         52         M         2           59         3         2007.10         52         M         2           62         2         2007.11 </td <td>41</td> <td>4</td> <td>2007.06</td> <td>50</td> <td>М</td> <td>1</td>	41	4	2007.06	50	М	1
44         2         2007.07         43         M         1           45         2         2007.07         65         M         2           46         3         2007.07         38         F         1           47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         69         M         1           52         3         2008.03         44         M         1           53         4         2007.09         52         M         2           54         2         2007.10         46         F         1           56         1         2007.10         52         F         1           58         2         2007.10         52         M         2           59         3         2007.10         42         M         1           61         2         2007.11 </td <td>42</td> <td>4</td> <td>2007.07</td> <td>45</td> <td>М</td> <td>2</td>	42	4	2007.07	45	М	2
45         2         2007.07         65         M         2           46         3         2007.07         38         F         1           47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         69         M         1           52         3         2008.03         44         M         1           53         4         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         46         F         1           56         1         2007.10         52         F         1           58         2         2007.10         52         M         2           59         3         2007.10         41         M         1           61         2         2007.11 </td <td>43</td> <td>2</td> <td>2007.07</td> <td>40</td> <td>М</td> <td>1</td>	43	2	2007.07	40	М	1
46         3         2007.07         38         F         1           47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         69         M         1           52         3         2008.03         44         M         1           53         4         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         46         F         1           56         1         2007.10         52         F         1           58         2         2007.10         52         M         2           59         3         2007.10         41         M         1           61         2         2007.11         53         M         2           62         2         2007.11 </td <td>44</td> <td>2</td> <td>2007.07</td> <td>43</td> <td>М</td> <td>1</td>	44	2	2007.07	43	М	1
47         2         2007.08         38         M         1           48         2         2007.08         51         F         1           49         4         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         69         M         1           52         3         2008.03         44         M         1           53         4         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         46         F         1           56         1         2007.10         52         F         1           57         2         2007.10         52         F         1           58         2         2007.10         52         M         2           59         3         2007.10         41         M         1           61         2         2007.11         53         M         2           62         2         2007.11 </td <td>45</td> <td>2</td> <td>2007.07</td> <td>65</td> <td>М</td> <td>2</td>	45	2	2007.07	65	М	2
48         2         2007.08         51         F         1           49         4         2007.08         62         M         1           50         2         2007.09         51         F         1           51         2         2007.09         69         M         1           52         3         2008.03         44         M         1           53         4         2007.09         52         M         2           54         2         2007.09         35         F         1           55         4         2007.10         46         F         1           56         1         2007.10         33         M         1           57         2         2007.10         52         F         1           58         2         2007.10         52         M         2           59         3         2007.10         42         M         1           61         2         2007.11         53         M         2           62         2         2007.11         51         M         1           64         3         2007.12 </td <td>46</td> <td>3</td> <td>2007.07</td> <td>38</td> <td>F</td> <td>1</td>	46	3	2007.07	38	F	1
4942007.0862M15022007.0951F15122007.0969M15232008.0344M15342007.0952M25422007.0935F15542007.1046F15612007.1033M15722007.1052F15822007.1052M25932007.1052M26042007.1042M16122007.1153M26222007.1153F16342007.1252F16432007.1252F16542007.1150M16622007.1144F16742007.1138M36922007.1154M17022007.1243M17142007.1249M17342007.1260M1	47	2	2007.08	38	М	1
502 $2007.09$ $51$ F1 $51$ 2 $2007.09$ $69$ M1 $52$ 3 $2008.03$ $44$ M1 $53$ 4 $2007.09$ $52$ M2 $54$ 2 $2007.09$ $35$ F1 $55$ 4 $2007.10$ $46$ F1 $56$ 1 $2007.10$ $33$ M1 $57$ 2 $2007.10$ $52$ F1 $58$ 2 $2007.10$ $52$ M2 $59$ 3 $2007.10$ $52$ M2 $59$ 3 $2007.10$ $41$ M1 $60$ 4 $2007.10$ $41$ M1 $61$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $55$ F1 $63$ 4 $2007.11$ $51$ M1 $64$ 3 $2007.12$ $52$ F1 $65$ 4 $2007.11$ $50$ M1 $66$ 2 $2007.11$ $48$ M2 $68$ 4 $2007.11$ $38$ M3 $69$ 2 $2007.12$ $43$ M1 $70$ 2 $2007.12$ $49$ M1 $71$ $4$ $2007.12$ $49$ M1 $73$ $4$ $2007.12$ $60$ M1	48	2	2007.08	51	F	1
512 $2007.09$ $69$ M1 $52$ 3 $2008.03$ $44$ M1 $53$ 4 $2007.09$ $52$ M2 $54$ 2 $2007.09$ $35$ F1 $55$ 4 $2007.10$ $46$ F1 $56$ 1 $2007.10$ $33$ M1 $57$ 2 $2007.10$ $52$ F1 $58$ 2 $2007.10$ $52$ M2 $59$ 3 $2007.10$ $52$ M1 $60$ 4 $2007.10$ $41$ M1 $61$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $53$ F1 $63$ 4 $2007.12$ $52$ F1 $64$ 3 $2007.12$ $52$ F1 $65$ 4 $2007.11$ $51$ M1 $66$ 2 $2007.11$ $50$ M1 $66$ 2 $2007.11$ $48$ M2 $68$ 4 $2007.11$ $48$ M3 $69$ 2 $2007.12$ $43$ M1 $71$ 4 $2007.12$ $49$ M1 $73$ 4 $2007.12$ $60$ M1	49	4	2007.08	62	М	1
52         3 $2008.03$ $44$ M         1 $53$ 4 $2007.09$ $52$ M $2$ $54$ 2 $2007.09$ $35$ F         1 $55$ 4 $2007.10$ $46$ F         1 $56$ 1 $2007.10$ $33$ M         1 $56$ 1 $2007.10$ $52$ F         1 $57$ 2 $2007.10$ $52$ F         1 $58$ 2 $2007.10$ $52$ M $2$ $59$ 3 $2007.10$ $41$ M         1 $60$ 4 $2007.10$ $41$ M         1 $61$ 2 $2007.11$ $53$ M $2$ $62$ 2 $2007.11$ $51$ M         1 $63$ 4 $2007.11$ $50$ M         1 $64$ 3 $2007.11$ $50$ M	50	2	2007.09	51	F	1
534 $2007.09$ $52$ M $2$ $54$ 2 $2007.09$ $35$ F1 $55$ 4 $2007.10$ $46$ F1 $56$ 1 $2007.10$ $33$ M1 $57$ 2 $2007.10$ $52$ F1 $58$ 2 $2007.10$ $52$ M $2$ $59$ 3 $2007.10$ $42$ M1 $60$ 4 $2007.10$ $41$ M1 $61$ 2 $2007.11$ $53$ M $2$ $62$ 2 $2007.11$ $53$ M $2$ $63$ 4 $2007.11$ $51$ M1 $64$ 3 $2007.12$ $52$ F1 $65$ 4 $2007.11$ $50$ M1 $66$ 2 $2007.11$ $44$ F1 $67$ 4 $2007.11$ $48$ M $2$ $68$ 4 $2007.11$ $38$ M $3$ $69$ 2 $2007.12$ $43$ M1 $70$ 2 $2007.12$ $43$ M1 $71$ $4$ $2007.12$ $49$ M1 $73$ $4$ $2007.12$ $60$ M1	51	2	2007.09	69	М	1
542 $2007.09$ $35$ F1 $55$ 4 $2007.10$ $46$ F1 $56$ 1 $2007.10$ $33$ M1 $57$ 2 $2007.10$ $52$ F1 $58$ 2 $2007.10$ $52$ M2 $59$ 3 $2007.10$ $42$ M1 $60$ 4 $2007.10$ $41$ M1 $61$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $51$ M1 $63$ 4 $2007.12$ $52$ F1 $64$ 3 $2007.12$ $52$ F1 $66$ 2 $2007.11$ $50$ M1 $66$ 2 $2007.11$ $44$ F1 $66$ 2 $2007.11$ $48$ M2 $68$ 4 $2007.11$ $38$ M3 $69$ 2 $2007.12$ $43$ M1 $71$ 4 $2007.12$ $49$ M1 $72$ 3 $2007.12$ $35$ F1 $73$ 4 $2007.12$ $60$ M1	52	3	2008.03	44	М	1
554 $2007.10$ 46F1 $56$ 1 $2007.10$ $33$ M1 $57$ 2 $2007.10$ $52$ F1 $58$ 2 $2007.10$ $52$ M2 $59$ 3 $2007.10$ $42$ M1 $60$ 4 $2007.10$ $41$ M1 $61$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $53$ M2 $62$ 2 $2007.11$ $53$ F1 $63$ 4 $2007.11$ $51$ M1 $64$ 3 $2007.12$ $52$ F1 $65$ 4 $2007.11$ $50$ M1 $66$ 2 $2007.11$ $44$ F1 $66$ 2 $2007.11$ $48$ M $2$ $68$ 4 $2007.11$ $38$ M $3$ $69$ 2 $2007.12$ $43$ M1 $70$ 2 $2007.12$ $43$ M1 $71$ $4$ $2007.12$ $49$ M1 $72$ 3 $2007.12$ $35$ F1 $73$ $4$ $2007.12$ $60$ M1	53	4	2007.09	52	М	2
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	54	2	2007.09	35	F	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	55	4	2007.10	46	F	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	56	1	2007.10	33	М	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	57	2	2007.10	52	F	1
	58	2	2007.10	52	М	2
61         2         2007.11         53         M         2           62         2         2007.11         35         F         1           63         4         2007.11         51         M         1           64         3         2007.12         52         F         1           65         4         2007.11         50         M         1           66         2         2007.11         50         M         1           66         2         2007.11         44         F         1           67         4         2007.11         48         M         2           68         4         2007.11         38         M         3           69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	59	3	2007.10	42	М	1
62         2         2007.11         35         F         1           63         4         2007.11         51         M         1           64         3         2007.12         52         F         1           65         4         2007.11         50         M         1           66         2         2007.11         50         M         1           66         2         2007.11         44         F         1           67         4         2007.11         48         M         2           68         4         2007.11         38         M         3           69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	60	4	2007.10	41	М	1
63         4         2007.11         51         M         1           64         3         2007.12         52         F         1           65         4         2007.11         50         M         1           66         2         2007.11         50         M         1           66         2         2007.11         44         F         1           67         4         2007.11         48         M         2           68         4         2007.11         38         M         3           69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	61	2	2007.11	53	М	2
64         3         2007.12         52         F         1           65         4         2007.11         50         M         1           66         2         2007.11         44         F         1           66         2         2007.11         44         F         1           67         4         2007.11         48         M         2           68         4         2007.11         38         M         3           69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	62	2	2007.11	35	F	1
65       4       2007.11       50       M       1         66       2       2007.11       44       F       1         67       4       2007.11       48       M       2         68       4       2007.11       38       M       3         69       2       2007.11       54       M       1         70       2       2007.12       43       M       1         71       4       2007.12       49       M       1         72       3       2007.12       35       F       1         73       4       2007.12       60       M       1	63	4	2007.11	51	М	1
66         2         2007.11         44         F         1           67         4         2007.11         48         M         2           68         4         2007.11         38         M         3           69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	64	3	2007.12	52	F	1
67       4       2007.11       48       M       2         68       4       2007.11       38       M       3         69       2       2007.11       54       M       1         70       2       2007.12       43       M       1         71       4       2007.12       49       M       1         72       3       2007.12       35       F       1         73       4       2007.12       60       M       1	65	4	2007.11	50	М	1
68         4         2007.11         38         M         3           69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	66	2	2007.11	44	F	1
69         2         2007.11         54         M         1           70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	67	4	2007.11	48	М	2
70         2         2007.12         43         M         1           71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	68	4	2007.11	38	М	3
71         4         2007.12         49         M         1           72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	69	2	2007.11	54	М	1
72         3         2007.12         35         F         1           73         4         2007.12         60         M         1	70	2	2007.12	43	М	1
73 4 2007.12 60 M 1	71	4	2007.12	49	М	1
	72	3	2007.12	35	F	1
74         3         2008.01         52         M         1	73	4	2007.12	60	М	1
	74	3	2008.01	52	М	1
75 3 2008.01 26 M 1	75	3	2008.01	26	М	1
76         4         2008.01         51         M         2	76	4	2008.01	51	М	2
77 3 2008.01 51 F 1	77	3	2008.01	51	F	1
78 2 2008.01 75 M 1	78	2	2008.01	75	М	1
79         2         2008.02         60         M         1	79	2	2008.02	60	М	1

802 $2008.01$ $42$ $81$ 1 $2008.01$ $42$ $82$ 4 $2008.02$ $22$ $83$ 4 $2008.02$ $55$ $84$ 2 $2008.02$ $45$ $85$ 2 $2008.02$ $48$ $86$ 4 $2008.02$ $58$ $87$ 3 $2008.02$ $58$ $87$ 3 $2008.02$ $57$ $89$ 4 $2008.02$ $28$ $90$ 4 $2008.03$ $57$ $91$ 4 $2008.03$ $59$ $92$ 4 $2008.03$ $66$ $93$ 3 $2008.03$ $41$ $95$ 2 $2008.03$ $46$	F         M	1         1         2         1         1         1         2         1         2         1         2         1         2         1         2         1         3         1         1         3         1         1         1         1         1         1
82       4       2008.02       22         83       4       2008.02       55         84       2       2008.02       45         85       2       2008.02       48         86       4       2008.02       58         87       3       2008.02       30         88       2       2008.02       57         89       4       2008.02       28         90       4       2008.03       57         91       4       2008.03       59         92       4       2008.03       66         93       3       2008.03       41	M M M M M M M M M M M M M F	2 1 1 1 1 2 1 1 2 1 1 2 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1
83         4         2008.02         55           84         2         2008.02         45           85         2         2008.02         48           86         4         2008.02         58           87         3         2008.02         30           88         2         2008.02         57           89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         41	M M M M M M M M M M M M F	1 1 1 1 2 1 1 2 1 1 2 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1
84         2         2008.02         45           85         2         2008.02         48           86         4         2008.02         58           87         3         2008.02         30           88         2         2008.02         57           89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         41	M M M M M M M M M M M F	1 1 1 2 1 1 2 1 2 1 3 1 1 1 1
85         2         2008.02         48           86         4         2008.02         58           87         3         2008.02         30           88         2         2008.02         57           89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         41	M M M M M M M M M M F	1 1 2 1 1 2 1 2 1 3 1 1 1
86         4         2008.02         58           87         3         2008.02         30           88         2         2008.02         57           89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         41	M M M M M M M M M F	1 2 1 1 2 1 2 1 3 1 1 1
87         3         2008.02         30           88         2         2008.02         57           89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         41	M M M M M M M M F	2 1 1 2 1 3 1 1 1
88         2         2008.02         57           89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         41	M M M M M M F	1 1 2 1 3 1 1 1
89         4         2008.02         28           90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         66           94         4         2008.03         41	M M M M M M F	1 2 1 3 1 1 1
90         4         2008.03         57           91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         66           94         4         2008.03         41	M M M M F	2 1 3 1 1
91         4         2008.03         59           92         4         2008.03         66           93         3         2008.03         66           94         4         2008.03         41	M M M M F	1 3 1 1
92         4         2008.03         66           93         3         2008.03         66           94         4         2008.03         41	M M M F	3 1 1
93         3         2008.03         66           94         4         2008.03         41	M M F	1 1
94 4 2008.03 41	M F	1
	F	
95 2 2008.02 46		
2008.05 40	М	1
96 2 2008.03 45	1	2
97 3 2008.03 53	М	1
98 2 2008.03 68	F	1
99 4 2008.04 71	М	2
100 2 2008.04 45	F	1
101 4 2008.04 36	М	3
102 4 2008.04 55	F	3
103 3 2008.04 36	М	1
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105 3 2008.05 60	М	1
106 2 2008.05 46	F	1
107 2 2008.05 43	М	1
108 3 2008.05 52	М	1
109 2 2008.05 36	F	1
110 2 2008.05 67	М	1
111 4 2008.05 57	М	1
112 3 2008.06 35	М	1
113 4 2008.06 48	М	1
114 2 2008.06 45	F	1
115 3 2008.06 43	F	1
116 2 2008.06 61	М	1
117 2 2008.06 54	М	1
118 3 2008.06 51	М	1
119 4 2008.06 34	F	1
120 2 2008.06 65	М	1
121 4 2008.05 57	М	1
122 3 2008.06 77	М	1

123	4	2008.06	50	М	1
124	2	2008.06	52	М	2
125	4	2008.06	60	М	1
126	3	2008.06	56	М	2
127	1	2008.06	52	М	1
128	1	2008.06	60	М	1
129	4	2008.06	36	М	1
130	2	2008.07	52	М	2
131	3	2008.07	38	F	1
132	2	2008.08	76	М	1
133	1	2008.08	52	М	1
134	4	2008.07	58	М	2
135	3	2008.07	38	F	1
136	3	2008.08	62	М	2
137	2	2008.08	43	М	1
138	2	2008.08	38	F	1
139	2	2008.08	55	F	1
140	3	2008.08	38	М	1
141	2	2008.08	38	F	1
142	4	2008.08	66	М	1
143	2	2008.09	30	F	1
144	4	2008.09	61	М	3
145	3	2008.10	35	F	1
146	2	2008.10	42	М	1
147	4	2008.10	41	F	1
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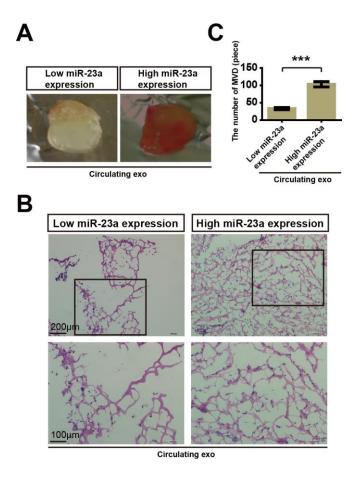


Supplymentary Figure S1: MiR-23a is highly expressed in NPC-exo by qEV Size Exclusion Columns. (a) Scheme exosomes isolation by qEV. (b) Western blot analysis of exosomal markers. Flotillin-1 was used as a loading control. (c-d) qRT-PCR of miRNA level in NPC-exosomes. Student's t-test.

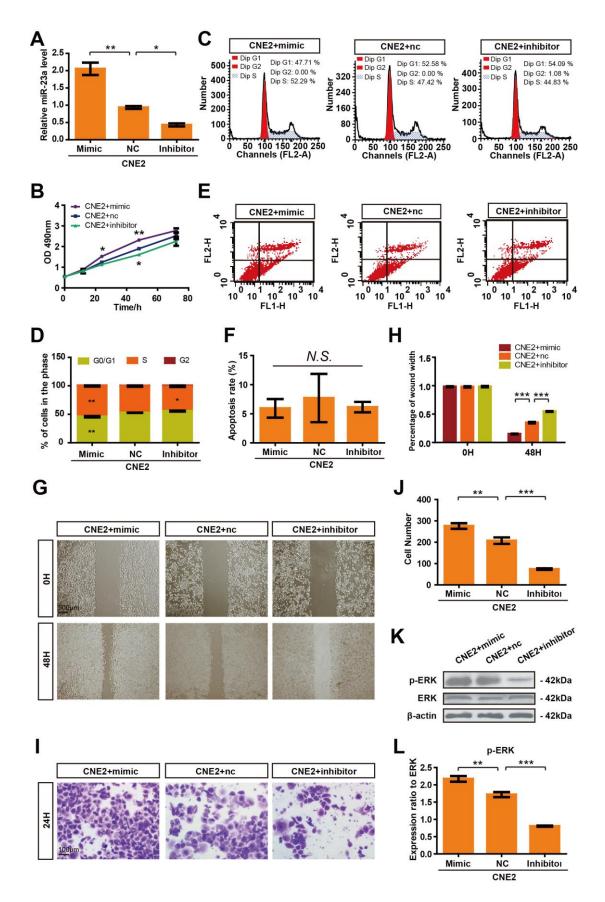


Supplymentary Figure S2: Circulating exosomes contain miR-23a modulates *in vitro* angiogenesis. (a) 48h after treated with circulating exosomes, miR-23a levels of HUVECs were measured by

qRT-PCR. t test. (b) Viabilities of HUVECs treated with circulating exosomes were measured by the CCK8 assay. Two-way ANOVA. (c-d) Flow cytometry analysis of the cell cycle were performed 48h after treated with circulating exosomes. t test. (e-f) Wound healing assay showed migration of HUVECs treated with various exosomes. Two-way ANOVA. (g-h) Transwell migration assays were performed to measure cell migration. t test. (i) Tube formation assays using HUVECs supplemented with exosomes were conducted using Matrigel. (j-k) Western blot of p-ERK in HUVECs incubation with circulating exosomes. t test.

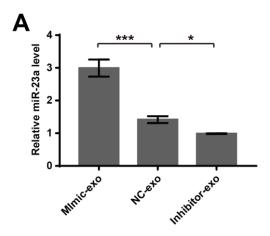


**Supplymentary Figure S3: Circulating exosomes contain miR-23a modulates** *in vivo* **angiogenesis.** (a) Gross observation, circulating exosomes modulated angiogenesis. (b) Representative micrographs of hematoxylin and eosin staining of Matrigel. (c) Quantitative evaluation of angiogenesis. Student's t-test.

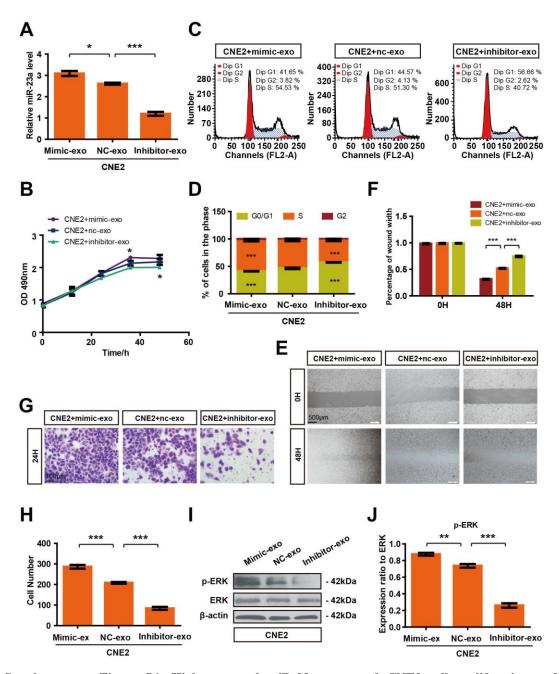


Supplymentary Figure S4: MiR-23a enhanced CNE2 cell proliferation and migration. (a) Transfection efficiency were measured by qRT-PCR. One-way ANOVA. (b) The cell growth of

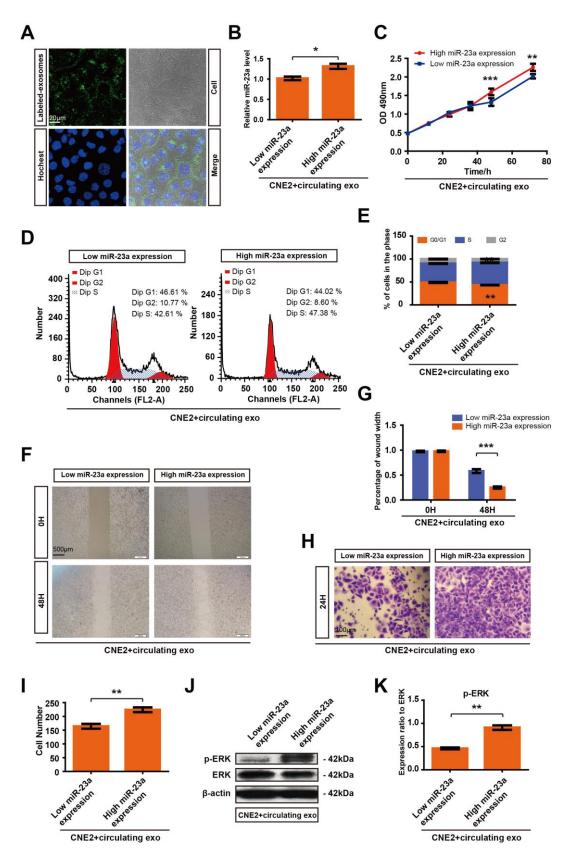
transfected CNE2 cells was measured by CCK8 assay. Two-way ANOVA. (c-d) Flow cytometry analysis of the cell cycle were performed at 36 after transfection. One-way ANOVA. (e-f) Apoptosis rates were measured by FCM analysis after Annexin V/PI staining. One-way ANOVA. (g-h) Wound healing assay showed cell migration in transfected CNE2 cells. Two-way ANOVA. (i-j) Transwell migration assays were performed to measure cell migration. One-way ANOVA. (k-l) images of p-ERK expression in transfected cells. One-way ANOVA.



**Supplymentary Figure S5: Exosomal miR-23a expression predominantly changed in miR-23a-treated cells by qEV Size Exclusion Columns.** (a) qRT-PCR of miRNA expression in exosomes isolated from HUVECs treated as indicated. One-way ANOVA.

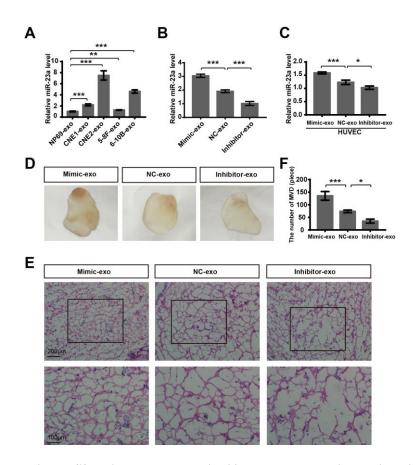


Supplymentary Figure S6: High exosomal miR-23a promoted CNE2 cell proliferation and migration. (a) 48h after treated with exosomes isolated from culture medium of transfected CNE-2 cells, miR-23a levels of CNE2 were measured by qRT-PCR. One-way ANOVA. (b) Viabilities of CNE2 cells treated with various exosomes were measured by the CCK8 assay. Two-way ANOVA. (c-d) Flow cytometry analysis of the cell cycle were performed 48h after treated with exosomes. One-way ANOVA. (e-f) Wound healing assay showed migration of CNE2 cells treated with various exosomes. Two-way ANOVA. (g-h) Transwell migration assays were performed to measure cell migration. One-way ANOVA. (i-j) Western blot of p-ERK in CNE2 cells incubation with exosomes. One-way ANOVA.



Supplymentary Figure S7: Circulating exosomes contain miR-23a modulates proliferation and migration of NPC cells. (a) Uptake of exosomes in CNE2 cells by confocal microscopy. Blue: Hoechst staining; Green: PKH67-labeled exosomes. (b) 48h after treated with circulating exosomes,

miR-23a levels of CNE2 cells were measured by qRT-PCR. t test. (c) Viabilities of CNE2 cells treated with circulating exosomes were measured by the CCK8 assay. Two-way ANOVA. (d-e) Flow cytometry analysis of the cell cycle were performed 48h after treated with circulating exosomes. t test. (f-g) Wound healing assay showed migration of CNE2 cells treated with various exosomes. Two-way ANOVA. (h-i) Transwell migration assays were performed to measure cell migration. t test. (j-k) Western blot of p-ERK in CNE2 cells incubation with circulating exosomes. t test.



**Supplymentary Figure S8: High exosomal miR-23a promoted angiogenesis using exosomes isolated from cellular media supplemented with exosome-free serum (SBI SystemBiosciences).** (a) qRT-PCR of miRNA level in exosomes isolated from NPC cells. t-test. (b) qRT-PCR of miRNA expression in exosomes isolated from miR-23a-treated-CM. One-way ANOVA. (c) 48h after treated with exosomes isolated from culture medium of transfected CNE-2 cells., miR-23a levels of HUVECs were measured by qRT-PCR. One-way ANOVA. (d) Gross observation, exosomes modulated angiogenesis. (e) Representative micrographs of hematoxylin and eosin staining of Matrigel. (f) Quantitative evaluation of angiogenesis. One-way ANOVA.