

Supplementary Table 5. Fuhrman grading results for studies reporting grade at biopsy

| Author, year | N | Renal cell carcinoma, n | Grade Assigned, n (%) | Fuhrman Grade: 1-2: n (%) 3-4: n (%) | Surgical Pathology Available | Upgraded: n (%) |
|---------------------------------|------|-------------------------|-----------------------|--|------------------------------|-----------------|
| Campbell,1997 ¹² | 25 | 10 | 10(100) | 1-2: 7(70) 3-4: 3(30) | 10 | 1(10) |
| Halverson, 2013 ¹⁴ | 151 | 125 | 97(78) | 1-2: 85(88) 3-4:12(12) | 97 | 37(38) |
| Leveridge, 2011 ¹⁰ | 345 | 183 | 100(55) | 1-2: 89(89) 3-4:11(1) | NR | NR |
| Menogue, 2012 ¹⁰ | 250 | 144 | 122(85) | 1-2: 115(94) 3-4: 7(5.7) | 72 | 17(24) |
| Millet, 2012 ¹⁹ | 187 | 132 | NR* | 1-2: 53(87) 3-4: 8(13) | 61 | 0(0) |
| Neuzillet, 2003 ²⁰ | 88 | 65 | 61(94) | 1-2: 55(90) 3-4:6(9.83) | 52 | 7(13) |
| Park, 2013 ²¹ | 59 | 29 | 4(14) | NR | 4 | 2(50) |
| Richard, 2015 ⁹ | 529 | 352 | 211(60) | 1-2: 194(92) 3-4: 17(8) | 101 | 6(6) |
| Salem, 2012 ²² | 145 | 90 | 47(52) | 1-2: 28(60) 3-4: 19(40) | 33 | NR |
| Schmidbauer, 2008 ²⁹ | 78 | 58 | 47(81) | NR | 47 | 2(4) |
| Sofikerim, 2009 ²⁴ | 42 | 34 | 34(100) | 1-2: 32(94) 3-4: 2(6) | 33 | 6(18) |
| Volpe, 2008 ²⁰ | 100 | 60 | 41(68) | 1-2: 30(73) 3-4: 11(27) | 12 | 0(0) |
| Summary | 1999 | 1282 | 774(67**) | 1-2: 688(88) 3-4: 96(12) | 489*** | 78(16) |

n= sample size; SD= Standard Deviation; W= White; NR=Not Reported

*Proportion of biopsies showing renal cell carcinoma that had grade assigned not reported; however, biopsy grade for 61 with surgical pathology available is reported.

**Denominator excludes ¹⁹ (N=132) as overall proportion assigned grade at biopsy not reported.

***Total excludes ¹⁹ and ²² as proportion upgraded on surgical pathology not given.