**Supplementary Table 2.** Data definitions across four renal cancer cohorts.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Stage (and subtype for TERTIARY & KiTS19) | | | Grade | Race/Ethnicity | Sex/Gender |
| PUF | Subtype | Stage (TNM\_PATH\_T) | | GRADE | RACE/ Spanish Hispanic Origin | SEX |
| CHROMOPHOBE CARCINOMA  EWING SARCOMA  MEDULLARY CARCINOMA, NOS  MESONEPHROMA, MALIGNANT  MIXED TUMOR, MALIGNANT, NOS  NEOPLASM  PAPILLARY CARCINOMA, NOS  PAPILLARY TRANS. CELL CARCINOMA  TRANSITIONAL CELL CARCINOMA, NOS  CARCINOMA, NOS  CARCINOMA, UNDIFF., NOS  CARCINOSARCOMA, NOS  CHONDROSARCOMA, NOS  SARCOMA, NOS  CLEAR CELL ADENOCARCINOMA, NOS  CLEAR CELL SARC/NEPHROBLASTOMA | **pX, p0, pA, p1, p1A**: size 4 cm  **p1B**: pT1b 4 cm size 7 cm  **p2A**: pT2a 7 cm size 10 cm  **p2B**: pT2b size 10 cm  **p3A**: pT3a, invade renal vein/branches, perirenal fat, renal sinus fat, or pelvicalyceal system  **p3B**: pT3b, extend into vena cava below diaphragm  **p3C**: pT3c, extend into vena cava above diaphragm or invade vena cava wall  **p4**: pT4, invade beyond Gerota’s fascia, including direct extension into adrenal gland  codes **p1, p2, p3, p4** will be interpreted by tumor size  **88**: not applicable  **99**: unknown | | **1** Grade I,1,i Well differentiated; differentiated, NOS  **2** Grade II,2,ii I/III or 1/3 Moderately differentiated; moderately well differentiated; intermediate differentiation  **3** Grade III,3,iii II/III or 2/3 Poorly differentiated  **4** Grade IV,4,iv III/III or 3/3 Undifferentiated; anaplastic | **01** Caucasian  **02** African American  **03** American Indian, Aleutian, or Eskimo  **04** Chinese  **05** Japanese  **06** Filipino  **07** Hawaiian  **08** Korean  **10** Vietnamese  **11** Laotian  **12** Hmong  **13** Kampuchean (including Khmer and Cambodian) **14** Thai  **15** Asian Indian or Pakistani, NOS (formerly code 09)  **16** Asian Indian **17** Pakistani  **20** Micronesian, NOS  **21** Chamorran  **22** Guamanian, NOS  **25** Polynesian, NOS  **26** Tahitian  **27** Samoan  **28** Tongan  **30** Melanesian, NOS  **31** Fiji Islander  **32** New Guinean **96** Other Asian, including Asian, NOS and Oriental, NOS  **97** Pacific Islander, NOS  **98** Other  **99** Unknown | **1** Male  **2** Female |
| TERTIARY | STAGE | DIAG (subtype) | | GRADE | RACE | GENDER |
| **1**, pT1  **2**, pT1a size 4 cm  **3**, pT1b 4 cm size 7 cm  **4**, pT2  **5**, pT2a 7 cm size 10 cm  **6**, pT2b size 10 cm  **7**, pT3  **8**, pT3a  **9**, pT3b  **10**, pT4  **11**, pT4a  **12**, pT4b  **13**, pT3c  **14**, pTa  **15**, pTis | **1**, Clear cell RCC  **2**, Papillary RCC  **3**, Chromophobe RCC  **4**, Cystic RCC  **5**, Unclassified RCC  **6**, Sarcomatoid RCC  **7**, TCC  **8**, Oncocytoma (aggressive)  **9**, AML  **10**, Simple cyst  **11**, Hemorrhagic cyst  **12**, Complex cyst  **13**, Pseudocyst  **14**, Dense fibrosis  **15**, Cystic nephroma  **16**, Metanephric adenoma  **17**, Renal tubular hyperplasia  **18**, Vascular malformation  **19**, Fibroma  **20**, Mixed epithelial and stromal tumor  **21**, Clear cell papillary RCC  **22**, RCC, undifferentiated  **23**, Collecting duct (Bellini) carcinoma  **24**, Focal subcapsular nephrosclerotic scarring | | **1**: 1  **2**: 2  **3**: 3  **4**: 4  **0**: N/A | **1**="American Indian or Alaska Native"  **2**="Asian" **3**="African American or African American" **4**="Hispanic or Latino"  **5**="Native Hawaiian or Other Pacific Islander" **6**="Caucasian" **7**="Other" | **0**="Male" **1**="Female" |
| TCGA KIRC | STAGE | | | GRADE | RACE | GENDER |
| **1**=Stage I  **2**=Stage II  **3**=Stage III  **4**=Stage IV      Stage only applied for grade 1, 2 | | | **1**: G1  **2**: G2  **3**: G3  **4**: G4 | **1**="American Indian or Alaska Native"  **2**="Asian" **3**="African American or African American" **4**="Hispanic or Latino"  **5**="Native Hawaiian or Other Pacific Islander" **6**="Caucasian" **7**="Other" | **0**="Male" **1**="Female" |
| KiTS19 | T STAGE | | SUBTYPE | ISUP (used interchangeably with grade) | N/A | GENDER |
| **1a**: size 4 cm  **1b**: pT1b 4 cm size 7 cm  **2a**: pT2a 7 cm size 10 cm  **2b**: pT2b size 10 cm  **3**: pT3  **4**: pT4, invade beyond Gerota’s fascia, including direct extension into adrenal gland | | **Angiomyolipoma**  **chromophobe**  **clear\_cell\_papillary\_rcc**  **clear\_cell\_rcc**  **mest**  **multiocular\_cystic\_rcc**  **papillary**  **rcc\_unclassified**  **spindle\_cell\_neoplasm**  **urothelial**  **wilms** | **1**: 1  **2**: 2  **3**: 3  **4**: 4 | None | **Male**  **Female** |

*Bolded values represent values in the data.*