Red Flag Criteria

1. Identify all patient records with: (Urinalysis with RBCs>50)1

Clinical Exclusion Criteria

- 2. Then Exclude patients < 35 years old on test result date
- 3. Then Exclude patients listed as deceased within 60 DAYS AFTER test result date
- 4. Then Exclude patients with active (bladder cancer diagnosis) within 1 YEAR PRIOR TO test result date
- 5. Then Exclude patients (with cystectomy) 4 ANY TIME PRIOR to test result date
- 6. Then Exclude patients (enrolled in hospice or palliative care) 5 within 1 YEAR PRIOR TO and 60 DAYS AFTER test result date
- 7. Then Exclude patients with a diagnosis of (pancreatic cancer)⁶ OR (leukemia [except acute lymphocytic])⁷ OR (liver cancer)⁸ OR (biliary cancer) OR (esophageal cancer) OR (gastric cancer) OR (brain cancer) OR (uterine cancer) OR (ovarian cancer) OR (peritoneal, omental, or mesenteric cancer) OR (myeloma) OR (lung, bronchus, tracheal, or mesothelial cancer) diagnosis)¹⁷ within 1 YEAR PRIOR TO and 60 DAYS AFTER test result date
- 8. Then Exclude patients with diagnosis of (ureteral stones)¹⁸ OR (renal stones)¹⁹ within 3 MONTHS PRIOR TO the test result date 9. Then Exclude patients with diagnosis of UTI²⁰ OR (UTI-related antibiotics order)²¹ OR positive culture result OR (positive bacteria, leukocytes, Leukocyte esterase or nitrites)²² within 2 DAYS PRIOR TO or 7 DAYS AFTER the test result date
- 10. Then Exclude patients with (cystoscopy)²³ WITHIN 1 YEAR PRIOR TO test result date
- 11. Then Exclude patients with (renal biopsy)²⁴ OR (prostate biopsy)²⁵ OR (renal stone surgery)²⁶ OR (stent placement)²⁷ OR (bladder surgery)²⁸ OR (bladder biopsy)²⁹ WITHIN 3 MONTHS PRIOR TO test result date

Expected Follow-up Criteria

- 12. Then Exclude patients with a completed (urology visit)³⁰ WITHIN 60 DAYS AFTER test result date
- 13. Then Exclude patients with a (cystoscopy)²³ performed WITHIN 60 DAYS AFTER test result date
- 14. Then Exclude patients with a (abdominal/pelvic CT)³¹ OR (abdominal/pelvic MRI)³² OR (renal ultrasound)³³ performed WITHIN
- 15. Then Exclude patients with a completed (bladder biopsy)²⁹ OR (renal biopsy)²⁴ OR (bladder surgery)²⁸ WITHIN 60 DAYS AFTER test result date

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Based on LOINC 13945
    Based on status in mortality table
    Based on ICD-9 188.x, 239.4, 236.7 (where 'x' is any value)
    Based on ICD-9 57.6, 57.7y (where 'y' is any value between 1 and 9); CPT 51550, 51555, 51570, 51575, 51580, 51585, 51590, 51595, 51596
    Based on ICD-9 V66.7 or consult code entry for completed Hospital/Palliative Care consult
    Based on ICD-9 157.xx
     Based on ICD-9 205.0, 206.0, 207.0, 207.2x, or 208.0
    Based on ICD-9 155.0, 155.1, 155.2, or 197.7
    Based on ICD-9 156.xx
10 Based on ICD-9 150.xx
11 Based on ICD-9 151.xx
<sup>12</sup> Based on ICD-9 191.x, 198.3, or 198.4
<sup>13</sup> Based on ICD-9 179.xx
14 Based on ICD-9 183.0
<sup>15</sup> Based on ICD-9 158.8, 158.9, or 197.6
<sup>16</sup> Based on ICD-9 203.0x, or 238.6
<sup>17</sup> Based on ICD-9 162.0, 162.2x, 162.3x, 162.4x, 162.5x, 162.8x, 162.9x, 163.xx, 197.0, , 197.2, or 197.3 (where 'x' is any value)
<sup>18</sup> Based on ICD-9 592.0, 247.11, 594.x (where 'x' is 0, 1, 2, 8, or 9)
<sup>19</sup> Based on ICD-9 592.0, 247.11
<sup>20</sup> Based on ICD9 599.0
<sup>21</sup> Based on UTI-related antibiotics order of CIPROFLOXACIN,CIPROFLOXACIN/DEXTROSE,FOSFOMYCIN,LEVOFLOXACIN, NITROFURANTOIN, OFLOXACIN,
         SULFAMETHOXAZOLE/TRIMETHOPRIM,TRIMETHOPRIM,CEFPODOXIME,CEFDINIR,cefaclor,Cipro, Monurol, Levaquin, Furadantin, Macrobid, Macrodantin, Bactrim, Septra
<sup>22</sup> Based on LOINC 5769, 25145, 33218, 5820, 33228, 33825, 5821, 33768, 32782, 27297, 5799, 27297, 33052, 30405, and 5802
<sup>23</sup> Based on CPT 5200x(where x is 0,1,5,or 7),52010,522x4(where x is 0,1,2,or 3),522x0(where x is 4,5 or 6),52265,5227x(where x is 0,5,6 or 7),
         5228x (where \ x \ is \ 1,2,3,5, \ or \ 7), 52290, 52305, 5231x (where \ x \ is \ 0,5,7, or \ 8), 52320, 52330 (where \ x \ is \ 0,2 \ or \ 4), 52341 (where \ x \ is \ 1,3,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (where \ x \ is \ 1,0,4, \ or \ 6), 52351 (whe
<sup>24</sup> Based on CPT 50200, 50205, 50555, 50557, 50574, 50576, or ICD-9 55.23, 55.24
<sup>25</sup> Based on CPT 55700, 55701, 55702, 55703, 55704, 55705, 55706, 52648, 53850, or ICD-9 60.11, 60.12
26 Based on CPT 5006x (where x is any value between 0 and 9), 5007x (where x is any value between 0 and 5), 50080, 50081, 50130, 50590, or ICD-9 55.01(where x is any value between 1 and 4), 56.0, 98.51
<sup>27</sup> Based on CPT 50382, 50384, 50385, 50386, 50387, 50393, 50605, 50947, 51045, 52332, 52356, 74480, or ICD-9 59.8
28 Based on CPT 51020, 51021, 51022, 51023, 51024, 51025, 51026, 51027, 51028, 51029, 51030, 51040, 51045, 51050, 51060, 51065, 51080, 51500, 51520, 51521, 51522, 51523, 51524, 51525, 51526,
          51527, 51528, 51529, 51530, 51535, 51550, 51595, 51555, 51554, 51555, 51556, 51565, 51570, 51571, 51572, 51573, 51574, 51575, 51580, 51581, 51582, 51583, 51584, 51585, 51580, 51581, 51580, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 51581, 5
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          51980, 51990, 51991, 51992, 51999, 52000, 52001, 52005, 52006, 52007, 52010, 52402, 52441, 52442, or any CPT between 52204 and 52318, or any CPT between 52320 and 52356, or ICD-9 57.0, 57.11,
         57.12, 57.13, 57.14, 57.15, 57.16, 57.17, 57.18, 57.19, 57.1, 57.21, 57.22, 57.22, 57.41, 57.49, 57.4, 57.51, 57.59, 57.5, 57.6, 57.71, 57.79, 57.7, 57.81, 57.89, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.99, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91, 57.91
<sup>29</sup> Based on CPT 52204, 52250, or ICD-9 57.33, 57.34
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³¹ Based on CPT 74150, 74160, 74170, 74174, 74175, 74176, 74177, 74178 or ICD-9 88.01, 88.02, 87.71

³⁰ Based on Stop Code 65, 414, or 430

³² Based on CPT 74181, 74182, 74183, 74185 or ICD-9 88.95 33 Based on CPT 76700, 76770, 76775, 76776 or ICD-9 88.75, 88.76