Follow Up Guidelines for Patients who have Undergone Curative Surgery for Renal Cell Carcinoma

CCNS GU CST Statement
Approved February 2012

Goals of Follow up Care:

- To manage post-operative complications
- To monitor renal function
- To detect local recurrences after partial nephrectomy
- To detect recurrences in the contralateral kidney
- To detect the development of metastases

There is a benefit to early detection if:

- A solitary metastasis is found and the patient is amenable to metastasectomy
- An isolated local recurrence is found and amenable to further surgery
- A contralateral renal tumor is found and amendable to further procedures
- Low volume metastatic disease is detected

A review of the existing guidelines for follow up was undertaken. This included a 2004 multicenter Canadian review\(^1\), the 2009 Canadian Urological Association Guidelines\(^2\), the 2011 European Association of Urology guidelines\(^3\) and the UCLA Follow Up guidelines based on the Integrated Staging System (UISS)\(^4\).

Based on its inclusiveness, comprehensiveness and sample size, the CCNS GU CST chose to follow the UISS system which stratifies patients into low, intermediate, and high risk of recurrence and follows patients according to those stratifications. See the diagrams on the following pages.

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UCLA Integrated Staging System (UISS)

Revised June 19, 2012


ECOG Performance Status table follows on next page.
ECOG PERFORMANCE STATUS

<table>
<thead>
<tr>
<th>Grade</th>
<th>ECOG</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Fully active, able to carry on all pre-disease performance without restriction</td>
</tr>
<tr>
<td>1</td>
<td>Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work</td>
</tr>
<tr>
<td>2</td>
<td>Ambulatory and capable of all selfcare but unable to carry out any work activities. Up and about more than 50% of waking hours</td>
</tr>
<tr>
<td>3</td>
<td>Capable of only limited selfcare, confined to bed or chair more than 50% of waking hours</td>
</tr>
<tr>
<td>4</td>
<td>Completely disabled. Cannot carry on any selfcare. Totally confined to bed or chair</td>
</tr>
<tr>
<td>5</td>
<td>Dead</td>
</tr>
</tbody>
</table>

As published in Am. J. Clin. Oncol.:

Credit: Eastern Cooperative Oncology Group, Robert Comis M.D., Group Chair.
Renal Cell Carcinoma
Post-Nephrectomy Follow Up
Recommendations

**Low Risk:** T1, N0, Grade 1-2, ECOG 0

Follow-up is through the urologist and/or the family doctor and it is important for the patient to be clear who is responsible. If the patient is symptomatic or if there are abnormal blood test results, earlier radiologic investigations may be indicated.

**Instructions for use:**
- Calculate the date of all follow-up tests based on the date of surgery and recommended timelines at the first follow-up visit.
- Physicians are encouraged to provide a copy of the form to the patient so the patient is aware of when and which tests are due.

**Date of Surgery (yyyy/mm/dd):**

**Type of Surgery:**
- [ ] Total nephrectomy
- [ ] Partial nephrectomy
- [ ] Laparoscopic
- [ ] RPLND
- [ ] Adrenalectomy

**Pathology Results**

Conventional (clear cell) [ ]
Mixed papillary I & II [ ]

papillary type I [ ]
chromophobe [ ]
other:________

*Fuhrman grade: /4

Fat Invasion:
- Hilar ______
- Perirenal ______

Vascular invasion:
- yes [ ]
- no [ ]

Lymphatic invasion:
- yes [ ]
- no [ ]

Stage: T ____ N ____ M ____

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Renal Cell Carcinoma
Post-Nephrectomy Follow Up Recommendations

Low Risk:

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<th>Years</th>
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<tr>
<td></td>
<td>1</td>
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<tr>
<td>History and Physical Exam</td>
<td></td>
</tr>
<tr>
<td>Lab studies (CBC, renal function, serum chemistries, LFTs)</td>
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</tr>
<tr>
<td>Chest X-Ray</td>
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<tr>
<td>Abdominal imaging * if T1b, consider abdominal imaging at 12 months</td>
<td></td>
</tr>
</tbody>
</table>

Reference: Lam JS et al, J Urol., 174: 466, 2005
Renal Cell Carcinoma

Post-Nephrectomy Follow Up

Recommendations

Intermediate Risk:

- T1, N0, Grade 3-4, ECOG 0-3
- T1, N0, Grade 1-2, ECOG >0
- All T2, N0, ECOG 0-3
- T3, N0, Grade 1, ECOG 1-3
- T3, N0, Grade >1, ECOG 0

Follow-up is through the urologist and/or the family doctor and it is important for the patient to be clear who is responsible.

If patient is symptomatic or there are abnormal blood test results, earlier radiologic investigations may be indicated.

Instructions for use:

- Calculate date for all follow-up tests based on date of surgery and recommended timelines at the first follow-up visit.
- Physicians are encouraged to provide a copy of the form to the patient so that the patient is aware of when the tests are due.

Date of Surgery (yyyy/mm/dd)_____________

Type of Surgery: [ ] full nephrectomy [ ] partial nephrectomy

Pathology Results

Conventional (clear cell) [ ] papillary type I [ ] papillary type II [ ]
Mixed papillary I & II [ ] chromophobe [ ] other:____________

Fuhrman grade:  /4

Fat Invasion: Hilar _____ Perirenal _____

Vascular invasion: yes [ ] no [ ]

Lymphatic invasion: yes [ ] no [ ]

Stage: T ____ N ____ M ____
## Renal Cell Carcinoma
### Post-Nephrectomy Follow Up Recommendations

#### Intermediate Risk:

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<tr>
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<th>Months Follow Up</th>
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<tr>
<td>History and Physical</td>
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<tr>
<td>Lab studies</td>
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<tr>
<td>(CBC, serum chemistries, LFT)</td>
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<tr>
<td>Chest X-Ray</td>
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<tr>
<td>Abdominal imaging</td>
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Renal Cell Carcinoma
Post-Nephrectomy Follow Up Recommendations

High Risk:
T3, N0, Grade >1, ECOG >0
Any T4, N0, ECOG 0-3

Follow-up is through the urologist and/or the family doctor and it is important for the patient to be clear who is responsible.

If patient is symptomatic or there are abnormal blood test results, earlier radiologic investigations may be indicated.

Instructions for use:
• Calculate date for all follow-up tests based on date of surgery and recommended timelines at the first follow-up visit.
• Physicians are encouraged to provide a copy of the form to the patient so that the patient is aware of when the tests are due.

Date of Surgery (yyyy/mm/dd)_____________
Type of Surgery: [ ] full nephrectomy [ ] partial nephrectomy

Pathology Results
Conventional (clear cell) [ ] papillary type I [ ] papillary type II [ ]
Mixed papillary I & II [ ] chromophobe [ ] other:_____________

Fuhrman grade: /4

Fat Invasion: Hilar _____ Perirenal _____
Vascular invasion: yes [ ] no [ ]
Lymphatic invasion: yes [ ] no [ ]
Stage: T ____ N ____ M ____
Renal Cell Carcinoma
Post-Nephrectomy Follow Up
Recommendations

High Risk:

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<th>24</th>
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**Nodal disease:** Any T, N+

Follow-up is through the urologist and/or the family doctor and it is important for the patient to be clear who is responsible.

If patient is symptomatic or abnormal blood test, earlier radiologic investigations may be indicated.

**Instructions for use:**
- Calculate date for all follow-up tests based on date of surgery and recommended timelines at the first follow-up visit.
- Physicians are encouraged to provide a copy of the form to the patient so that the patient is aware of when the tests are due.

**Date of Surgery (yyyymm/dd)____________
Type of Surgery:  [ ] full nephrectomy [ ] partial nephrectomy**

**Pathology Results**
- Conventional (clear cell) [ ]
- Papillary type I [ ]
- Papillary type II [ ]
- Mixed papillary I & II [ ]
- Chromophobe [ ]
- Other:_____________

Fuhrman grade: /4

Fat Invasion:  Hilar _____  Perirenal _____

Vascular invasion:  yes [ ]  no [ ]

Lymphatic invasion:  yes [ ]  no [ ]

Stage: T _____  N _____  M _____

Revised June 19, 2012
Renal Cell Carcinoma
Post-Nephrectomy Follow Up Recommendations

Nodal disease:

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<th>Months Follow Up</th>
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<th>12</th>
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