Not all kidney cancers are the same:

Kidney cancers:
1. Can come from different cells of the kidney and thus have different “flavours” or “sub-types” of cancer (for further information read “histology”)
2. Can be more slow-growing or more aggressive (“grade”)
3. Can be larger or smaller, or have spread outside the kidney (“stage”).

All of these factors can affect:
- How aggressive the tumour is and how likely it is to spread
- Which treatment(s) (if any) you should have
- Which clinical trials you could take part in

1. Histology

Kidney cancer can be sub-divided into several different “flavours” or “sub-types” based on the appearance of the cancer cells under a microscope (the “histology” of the cancer). The type of kidney cancer is not usually important for surgery, but can be critical if more treatment is needed later.

The most common histologies are:
- **Clear cell carcinoma:** The most common form of kidney cancer, accounting for about 75% of people with renal cell carcinoma.
- **Papillary cell carcinoma:** About 10% to 15% of people have this form of kidney cancer.
- **Chromophobe carcinoma:** Accounts for about 5% of cases.
- **Other rare types:** About 5% of people have other rare forms of kidney cancer

To find out what type of kidney cancer you have, please refer to your Pathology Report or ask your doctor.

2. Grade

Each patient’s tumour is different from other peoples’ cancers in how aggressive it looks; the “grade” of the tumour. The grade of a cancer describes if the cells in the cancer are almost uniform and well organised, almost like a normal organ or tissue might look under the microscope (low grade), or if the cancer looks very disorganised and the cells are different in size and shape (high grade).

3. Stage

The stage of a cancer describes the size of the cancer, and whether or not it has spread. This helps to guide treatment and can help plan long-term follow-up care. When staging is based on clinical assessment alone, it is referred to as the clinical stage. Microscopic examination of the affected tissue determines the “pathologic” stage. A staging system is a standardised way in which the cancer care team describes the extent of the cancer.

Your doctor will determine the “stage” of your kidney cancer based on:
1. The size of the tumour (“T-stage”)
2. Spread of the cancer to the nearby lymph nodes (“N-stage”).
3. Spread of the cancer to other organs (“M-stage”) e.g. metastasis to liver, lung or bone.

The four main stages of kidney cancer (see table on reverse side) are based on this TNM staging system, which is one of the methods for “staging” kidney cancer.
### Types of Kidney Cancer

**Grade**
A description of a tumour based on how abnormal the cancer cells look under a microscope and how quickly the tumour is likely to grow and spread. Grading systems are different for each type of cancer. For kidney cancer, doctors use the Fuhrman nuclear grading system.

**Stage**
The extent of a cancer in the body. Staging is usually based on the size of the tumour, whether lymph nodes contain cancer, and whether the cancer has spread from the original (primary) site to other parts of the body.

#### Stages of kidney cancer

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Survival Rate</th>
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<tbody>
<tr>
<td>Stage I</td>
<td>The cancer is only within the kidney and has not spread. The cancer is less than 7 cm in size. If the cancer can be removed it is most likely to be cured with surgery. 9 out of 10 people will be alive and free of the cancer at five years after an operation.</td>
<td>The five year survival rate is still very high after surgery for stage 2 kidney cancer.</td>
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<tr>
<td>Stage II</td>
<td>The cancer is larger than 7 cm but is still confined to the kidney and has not spread outside of the kidney. Surgery is a good treatment option. The five year survival rate is still very high after surgery for stage 2 kidney cancer.</td>
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<tr>
<td>Stage III</td>
<td>The kidney cancer has moved nearby outside the kidney, but has not spread to distant organs. For example, the cancer might have spread into the fat around the kidney, into the blood vessel coming out of the kidney, or into lymph nodes near the kidney. Ask your doctor about all treatment options and clinical trials.</td>
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<tr>
<td>Stage IV</td>
<td>The kidney cancer has spread widely outside the kidney; to the abdominal cavity, to the adrenal glands, to distant lymph nodes or to other organs, such as the lungs, liver, bones, or brain. Ask your doctor about all treatment options and clinical trials.</td>
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</tbody>
</table>

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