A Guide to Kidney Cancer: Everything You Need to Know from Prognosis to Life Expectancy

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Kidney Cancer Prognosis and the 5-Year Survival Rate

When you're given a cancer diagnosis, probably one of the first things you ask is, "What is the kidney cancer prognosis?" A physician must consider a lot of factors when answering that question.

For example, what is the size of the tumor? Has it spread to the lymph nodes? Has it spread to other organs?

Although this article is in **no way definitive**, it does discuss relative kidney cancer prognosis based on several factors. Keep in mind that your prognosis is individualized to you – what we discuss in this article is generalizations.

The 5-Year Survival Rate

First of all, it is important to understand the "5-year survival rate." The 5-year survival rate "tell you what portion of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed."

The use of the 5-year survival rate can be a decent tool, but cancer survival rates don't tell the entire story. They are based on large populations of people, and thus are limited – they can't fully predict what will happen to one particular person.

The *American Cancer Society* believes that survival rates have the following limitations:

- The numbers are based on the most current research. To obtain 5-year survival rates, physicians look at people who were treated *at least five years ago.* However, treatments are evolving – meaning these survival rates may not be entirely accurate.
- Statistics are based on cancer when it was initially diagnosed; it does not take into consideration cancer that has come back or spread.
- "The outlook for each person is specific to his or her circumstances." Although the outlook is best when diagnosed early, it also varies based on the outlook, age, overall health, and responsiveness to treatment.

The AJCC TNM Staging System

The American Joint Committee on Cancer (AJCC) developed a staging system tumors called the TNM System, which stages tumors based on:

- The size of the primary **tumor (T)** and whether it has spread into nearby areas.
- If the cancer has spread to nearby lymph **nodes (N).**

- If the cancer has **metastasized** – spread – **(M)** to other organs or tissues.

The TNM system uses letters and numbers after T, N, and M to provide more details. For example, a higher number means the cancer is more advanced. This type of staging is called *stage grouping*

The TNM system also uses the staging that we've all heard about – stage 0 through stage 4. There are also sub-categories A, B, and C that can be assigned to each stage so that you may have heard of "stage 1B", for example. "Stage X" can also be used and means "cannot be assessed because the information is not available."

Generally, the lower the number, the less advanced the stage. If an additional letter is attached to the stage (A, B, C), the earlier the letter, the lower the stage.

Here are some examples from the *American Cancer Society* using both stage and stage grouping:

Stage I

- **T1, N0, M0:** the tumor is 7cm or less across and is confined to one kidney (T1). It has not spread to lymph nodes (N0) and has not metastasized (M0).

Stage II

- **T2, N0, M0:** the tumor is greater than 7cm across but is still confined to one kidney (T2). It has not spread to lymph nodes (N0) and has not metastasized (M0).
- **T3, N0, M0:** the tumor is growing into a major vein or into tissue around the kidney, but has not grown into the adrenal gland or surrounding fascia (T3). It has not spread to lymph nodes (N0) and has not metastasized (M0).

Stage III

- **T1 to T3, N1, M0:** the tumor may be any size and may be outside the kidney but has not spread to the fascia. The tumor has spread to nearby lymph nodes (N1), but has not metastasized (M0).

Stage IV

- **T4, any N, M0:** the tumor has grown into the fascia and may be growing into the adrenal gland. It may or may not have spread to lymph nodes (any N). It has not metastasized (M0).
- **Any T, any N, M1:** the tumor may be any size and may have grown outside the kidney (any T). It may or may not have spread to the lymph nodes (any T). It has spread to distant lymph nodes and to other organs (M1).

As a kidney cancer patient, when you are told your stage, you are probably told that you have "stage III" – not T1, N1, M0.

Your physician probably describes what this means to you in layman's terms – that your cancer may have spread to the lymph nodes but luckily has not spread to other organs.

You may hear "stage III" and automatically know that it is not as good of a prognosis as "stage I," but not quite as dire as "stage IV" – so what are typically 5-year survival rates based on the stages?

5-year survival rates:

- I: 81%
- II: 74%
- III: 53%
- IV: 8%

In the United Kingdom, these statistics are a bit skewed; for example, the 5-year survival rate for men diagnosed with stage II kidney cancer is 95%, whereas the 5-year survival rate for anyone diagnosed with stage I kidney cancer is 80%.

Why the discrepancy? You would think that being diagnosed with stage I would mean a better 5-year survival rate, right?

Well, UK researchers estimate that the discrepancy is because there are far fewer people diagnosed with stage II kidney cancer, skewing the results.

Factors Affecting Survival

As previously discussed, there are a number of factors that affect survival. The most prominent factor affecting survival is the size of the tumor and how far it has progressed at diagnosis.

However, there are other factors to consider as well. For example, if you are in good general health, you may fare better. Physicians can measure your “performance score” based on specific factors.

For example, a score of 0 indicates that you are fully functional and as active as you were before the illness. A score of 1 indicates that you have an inability to perform heavy work, but can otherwise live normally. The numbers carry on accordingly.

Also, age can play a part; a person who is younger at the age of diagnosis tends to fare better than someone who is older at diagnosis.

Physicians are also able to link specific factors to a shorter prognosis. For example, the following factors may indicate that the kidney cancer has spread outside the kidney, thus indicating a shorter survival time:

- A poor performance status (as discussed above)
- Elevated blood lactate dehydrogenase (LDH) level
- Elevated blood calcium level
- Anemia
- Cancer that has spread to 2 or more sites
- The need for systemic therapy (immunotherapy, chemotherapy, or targeted therapy) less than one year after diagnosis