NKCA
National Kidney Cancer Audit

NATCAN
National Cancer Audit Collaborating Centre

National Kidney Cancer Audit
Patient and Public Report

An audit of care received by people with kidney cancer between 1 January 2018 to 31 December 2022 in England and 1 January 2022 to 31 December 2023 in Wales.

National time trends in kidney cancer diagnoses and treatments between 1 January 2019 to 30 September 2024 in England and 1 January 2022 to 31 December 2023 in Wales.

Published September 2025

2. Infographic

Summary of results for people diagnosed with kidney cancer in **England (2018-2022)** and **Wales (2022-2023)**

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% E
% W
The number within the circle represents the national percentage (England top; Wales bottom) for the time period indicated

Diagnosis & staging (England 2020-2022 and Wales 2022-2023)

England in 2020-2022: **28,485** people were diagnosed with **kidney cancer**

Wales in 2022-2023: **986** people were diagnosed with **kidney cancer**

69 years — age at diagnosis (median) Interquartile range **59 - 77 years**

64% of people **were male**

59% E / **47%** W of people had kidney cancer **contained completely within the kidney** (T1)

21% E / **23%** W of people **had kidney cancer spread to other parts of the body - Stage 4**

82% E / **99%** W of people who had a **record of being discussed at a multi-disciplinary team (MDT) meeting**

1% of people with kidney cancer **consented for a clinical trial** (*data unavailable for Wales*)

Treatment Allocation (England 2020-2022)

20% of people **with a small kidney cancer (≤ 4cm) had a biopsy**

21% in 2022
21% in 2021
19% in 2020

Data unavailable for Wales

68% of people with high risk kidney cancer **had surgery within 31 days of decision to treat**

63% in 2022
69% in 2021
73% in 2020

Data unavailable for Wales

Surgery (England 2020-2022 and Wales 2022-2023)

78% of people who are well enough to have surgery **had surgery** (in England)

78% in 2022
78% in 2021
76% in 2020

82% of people who are well enough to have surgery had **surgery** (in Wales)

84% in 2023
80% in 2022

69% of people with a small kidney cancer (≤4cm) **had kidney tissue sparing treatment** (in England)

70% in 2022
72% in 2021
66% in 2020

Data unavailable for Wales

Systemic Anti-Cancer Therapy (SACT, England 2018-2022 and Wales 2022-2023)

49% E / **54%** W of people with kidney cancer spread to other parts of the body **received initial SACT within 12 months of diagnosis**

England: **50%** in 2022, **52%** in 2021, **48%** in 2020

Wales: **53%** in 2023, **56%** in 2022

3% E / **2%** W of people with kidney cancer **died within 30 days of SACT treatment**

England: **4%** in 2022, **3%** in 2021, **2%** in 2020

Wales: **0%** in 2023, **3%** in 2022

1. What is the National Kidney Cancer Audit (NKCA)?

Welcome to the National Kidney Cancer Audit (NKCA) Patient and Public Report 2025. The NKCA is delivered by the Clinical Effectiveness Unit (CEU) within the Royal College of Surgeons of England.

The overall aim of the NCKA is to improve the quality of care for people with kidney cancer in England and Wales. The NKCA looks at the care, treatment and outcomes for kidney cancer patients treated in NHS hospitals in England and Wales.

The audits specific objectives are to look at:

1. Increasing the fairness in timely access to evidence-based kidney cancer services across England and Wales
2. Increasing the use of kidney tumour biopsy
3. Speed up treatment for patients with high-risk kidney cancer
4. Reducing over-treatment and under-treatment of kidney cancer patients
5. Increasing the use of anticancer therapy in suitable patients without severe side effects

Individual kidney cancer centres send information about their service to the national cancer registration databases, and we use these data to build a picture of what is happening in NHS kidney cancer services in England and Wales. More information about the NKCA can be found on our website https://www.natcan.org.uk/audits/kidney/.

We measure performance on the diagnosis and treatment of kidney cancer when we assess what kidney cancer services are providing for patients. The audit uses targets about how kidney cancer patients should be cared for and we can see if kidney cancer care in the NHS is getting better or worse compared to previous years.

A version of this document exists for doctors, surgeons, nurses and other healthcare professionals with more details, and this can be found on our website.

2. What is kidney cancer?

Kidney cancer is a term used to describe an abnormal growth of cells in the kidney. This is called a tumour. These abnormal cells don't work like the other kidney cells and can grow and spread in the kidney and then around the body.

3. Who gets kidney cancer?

People who are diagnosed with kidney cancer are often aged between 59 and 77. However, the total range of adults who get kidney cancer is from 18 to 105. Kidney cancer is more often found in men (64%) than women (36%). Other things that can increase the risk of kidney cancer include obesity, smoking, high blood pressure, treatment for kidney failure and family history of kidney cancer.

4. What are the symptoms of kidney cancer?

Symptoms of kidney cancer can include blood in the urine, a lump or swelling in the back, loss of appetite or unintentional loss of weight. Sometimes people with kidney cancer don't notice any symptoms, and it is diagnosed because the person is receiving healthcare for another condition.

5. What are the types of kidney cancer?

The main type of kidney cancer is renal cell carcinoma (RCC) accounting for 80% of all kidney cancers. There are different types of renal cell carcinoma, including clear cell (70-80%), papillary (5-10%) and chromophobe (3-5%).

Here we are not looking at upper tract urothelial cancer (UTUC). This is a rare type of cancer of the lining of the kidney (renal pelvis) and kidney pipe (ureter).

6. Stages of kidney cancer

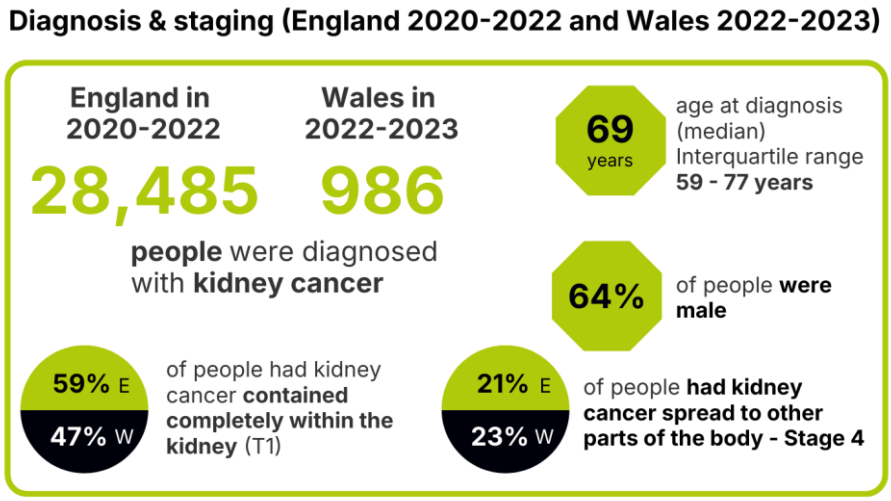
Doctors and nurses will talk about the stage of kidney cancer. This describes the size and any spread of the disease. Knowing the stage is important for deciding how to treat the cancer. The disease stages range from 1 to 4, with 1 being early stage and 4 being late stage. Many people with early-stage kidney cancer can be offered treatments that can cure the disease. Patient outcomes are usually much worse when the cancer is found at a late stage.

Stage 1 – the cancer is contained within the kidney and is less than or equal to 7cm in size.

Stage 2 – the cancer is bigger than 7cm but still in the kidney.

Stage 3 – the cancer has started to spread outside the kidney to the nearby major vein. The cancer may have spread to nearby lymph nodes.

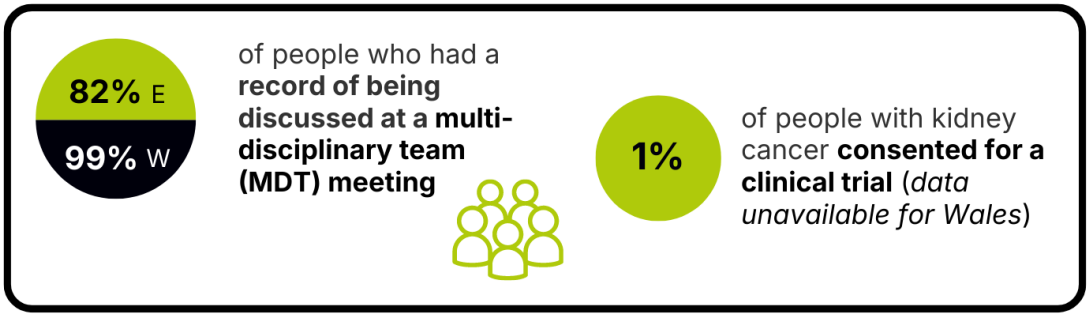
Stage 4 – the cancer has spread to nearby tissues or organs, or the cancer has spread to other parts of the body further away; stage 4 can also be called late stage.



7. Who is involved in patient care?

The team of healthcare specialists who deliver kidney cancer care are known as a multi-disciplinary team, or MDT for short. The team is made up of: Kidney Cancer Nurse Specialist (CNS), Urologists (kidney cancer surgeons), Oncologists (cancer doctors), Radiologists (x-ray/scan doctors), and Pathologists (doctors who look at cancer biopsies under a microscope). Usually, the MDT is where the team members involved in the patient's care discuss the patient's suitability for a clinical trial.

MDT



8. How is kidney cancer diagnosed?

Kidney cancer may be diagnosed following:

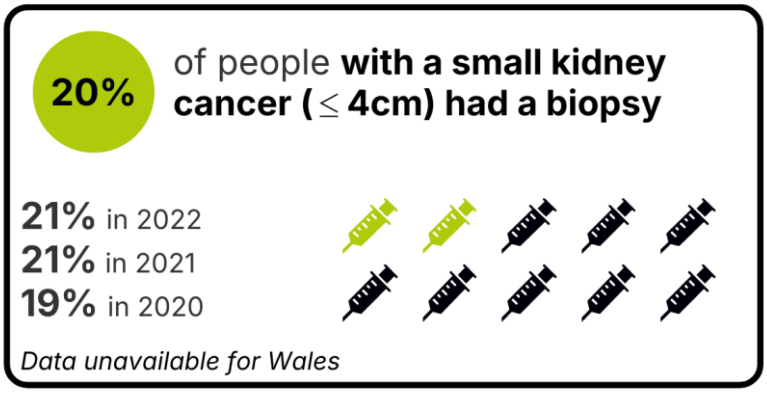
- Referral for more tests if someone has been to their GP with possible symptoms
- Attending Accident & Emergency (A&E) or Emergency Department (ED) because someone has symptoms that need emergency care
- Investigation for another illness or following a CT or ultrasound before surgery. This is sometimes called incidental or accidental findings

There is currently no screening programme for kidney cancer. Further tests can include blood tests, CT scans and MRI scans.

Doctors will sometimes take a biopsy of the tumour which means taking a small amount of the abnormal cells out to test them. This can be done using a needle through the skin into the kidney and tumour during a CT or ultrasound scan. A biopsy of the tumour can help to guide treatment choice for people with a small renal mass.

Kidney cancer is graded based on how abnormal the cancer cells appear under a microscope, which helps predict how aggressively the cancer may behave. The less the cancer cells look like normal kidney cells, the higher the grade. High-grade kidney cancers tend to grow quickly. They are more likely to spread to another part of the body.

Kidney Biopsy (England 2020-2022)

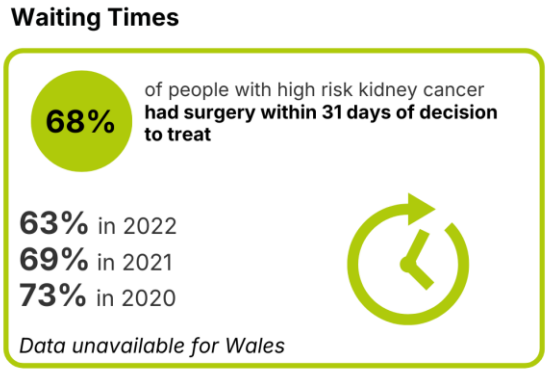


9. How long do patients wait for treatment?

There are waiting time targets to start treatment.

In England, Scotland and Northern Ireland the current targets are:

- no more than 2 months (62 days) wait between the date the hospital receives an urgent suspected cancer referral and the start of treatment
- no more than 31 days wait between the meeting at which you and your doctor agree the treatment plan and the start of treatment



10. How is kidney cancer treated?

Kidney cancer is treated in various ways depending on its size, type, spread and how fit the patient is. Some treatments are intended to cure the kidney cancer whilst some intend to slow the spread of the cancer and reduce symptoms.

Kidney tissue sparing treatment for small renal mass

(a) Partial Nephrectomy

The surgical removal of part of the kidney, which contains the kidney cancer. The goal is to remove the diseased portion while saving as much of the healthy kidney tissue as possible.

(b) Thermal Ablation

Thermal ablation is the used to treat small kidney cancers by using extreme heat or cold to destroy cancer cells:

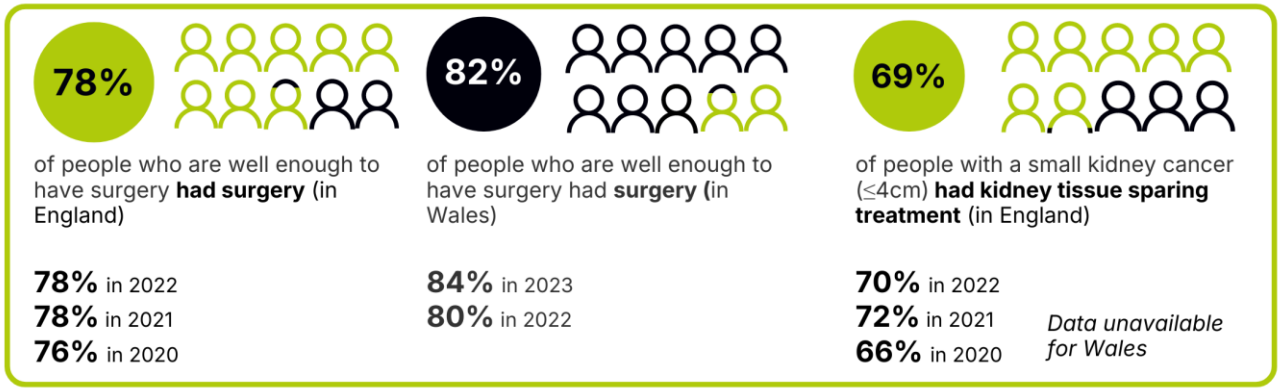
- Radiofrequency Ablation (RFA): Uses high-energy radio waves to generate heat that destroys cancer cells.
- Microwave ablation (MWA): Uses microwaves to generate heat and destroy cancer cells.
- Cryoablation: Uses extreme cold to freeze and kill cancer cells.

Surgery for kidney cancer

(a) Radical Nephrectomy

The surgical removal of an entire kidney to treat kidney cancer. The adrenal gland, which is a small gland on top of each kidney, is left behind if not involved with the kidney cancer. It produces hormones to help regulate metabolism.

Treatment intending to cure kidney cancer (England 2020-2022 and Wales 2022-2023)



Systemic Anti-Cancer Therapy (SACT) for stage 4 kidney cancer

(a) Targeted Therapy

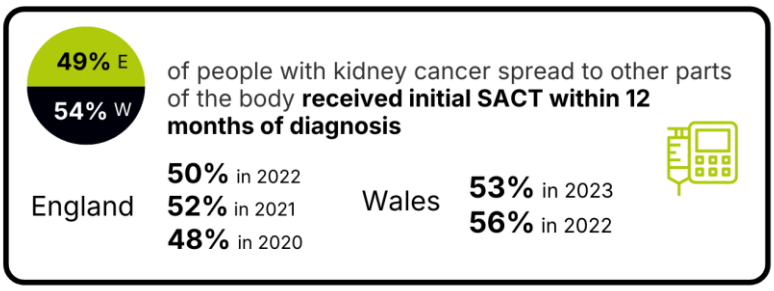
Medicines have been designed to target specific changes in the genes (mutations) in cancer cells. These targeted therapies treat cancer cells but do not have much effect on the normal cells in the rest of the body. Not all kidney cancers have these specific mutations, and some mutations don't yet have targeted treatments.

(b) Immunotherapy

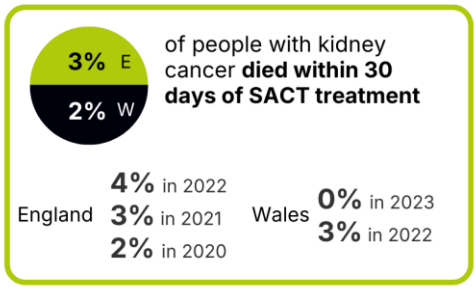
Immunotherapy uses the body's natural defences to fight cancer by improving the immune system's ability to recognise and attack cancer cells. People who are treated with immunotherapy for kidney cancer may be given either one drug or a combination of immunotherapy and targeted therapy.

Monitoring side effects after SACT to ensure care is safe, effective and patient-centred.

Systemic Anti-Cancer Therapy (SACT, England 2018-2022 and Wales 2022-2023)



Toxicity



11. What are the NKCA recommendations for the improvement of kidney cancer services?

Recommendation	Audit findings	Quality Improvement Goal
1. Increase the number of people with a small renal mass who receive a renal mass biopsy, by improving availability of timely diagnostics and by supporting shared decision making.	**England**: The percentage of people with a small renal mass who have a renal mass biopsy was 20%. Trend: 19% in 2020 to 21% in 2022, pre-pandemic level of 22% in 2019.	To increase the use of renal mass biopsy.
2. Review pathways for higher risk renal cell carcinoma (RCC) to understand delays in the system and prioritise these people over lower-risk cases, treating them within 31 days from decision to treat in England and 21 days in Wales.	**England**: The percentage of people with a high-risk kidney cancer who have a radical nephrectomy within 31 days of decision to treat was 68%. Trend: 73% in 2020 to 63% in 2022, pre-pandemic level of 76% in 2019.	To speed up the treatment of people with potentially high risk kidney cancer.
3. Identify and address reasons why people who could have surgery for kidney cancer are not considered for surgical treatment and increase the number of eligible people assessed and treated.	**England**: The percentage of people who are well enough to have surgery for kidney cancer who have surgery was 78%. Trend: 76% in 2020 to 78% in 2022, pre-pandemic level of 81% in 2019. **Wales**: The percentage of people who are well enough to have surgery for kidney cancer who have surgery was 82%.	To increase use of surgery, if medically appropriate, for initially localised RCC at risk of progression.
4. Ensure that people with a small renal mass are discussed in specialist multidisciplinary team meetings to support consistent and appropriate consideration for nephron sparing treatment.	**England:** The percentage of people with small renal mass who undergo nephron sparing treatment was 69%. Trend: 66% in 2020 to 70% in 2022, pre-pandemic level of 68% in 2019.	To reduce the use of unnecessary extensive surgery for low-risk RCC.
5. Ensure people diagnosed with kidney cancer which has spread to other sites are seen by an oncologist with expertise in kidney cancer and receive systemic anti-cancer therapy (SACT) if appropriate.	**England**: The percentage of people with kidney cancer spread receiving SACT was 49%. Trend: 48% in 2020 to 50% in 2022, pre-pandemic level of 48% in 2019.	To increase use of evidence based SACT treatment in eligible people with kidney cancer without severe side effects.

	Wales: The percentage of people with kidney cancer spread receiving SACT was 54%.	

12. Glossary

Biopsy	Removal of a small portion of the cancer or tumour, usually from the kidney but may also be from the liver, skin or other areas to look at under the microscope. It is important for making a diagnosis.
CT scan	A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body.
Cancer	Cancer is a disease in which some abnormal cells grow uncontrollably and spread to other parts of the body.
Curative-intent	This is used to describe treatment that aims to remove all the cancer and therefore cure the cancer disease.
Cancer Nurse Specialist (CNS)	A nurse who has expert knowledge and experience in cancer. They form part of the team of healthcare professionals who provide support, information and advice during kidney cancer investigations, diagnosis and treatment.
Immunotherapy	Immunotherapy uses our immune system to fight cancer. It works by helping the immune system recognise and attack cancer cells.
MRI (Magnetic Resonance Imaging)	A procedure that uses radio waves, magnets, and computers to make a series of detailed pictures of areas inside the body.
Multidisciplinary team (MDT)	A team of all the different healthcare professionals who may be involved in the care and treatment of patients with cancer.
National Kidney Cancer Audit (NKCA)	The NKCA assess the quality of services and care provided to individuals with kidney cancer in England and Wales. This is achieved by collecting clinical information about the treatment of all patients newly diagnosed with kidney cancer in England and Wales and information about their outcomes.
Nephron Sparing Treatment	Can be used to describe both partial nephrectomy and thermal ablation, as both involve treatment of the kidney cancer while preserving the healthy kidney tissue.
Partial Nephrectomy	The surgical removal of part of the kidney which contains the kidney cancer. The goal is to remove the diseased portion while preserving as much of the healthy kidney tissue as possible.
Radical Nephrectomy	The surgical removal of an entire kidney to treat kidney cancer. The adrenal gland, which is a small triangular shaped gland located on top of each kidney, is left behind if not involved with the kidney cancer. It produces hormones to help regulate metabolism.
Renal Cell Carcinoma (RCC)	Renal cell cancer is the most common type of kidney cancer in adults. Around 80 out of 100 kidney cancers (around 80%) are renal cell cancers.
Side Effect	Unwanted effect of a drug or treatment.
Small renal mass	A growth in the kidney that measures 4 cm or smaller.

Systemic Anti-cancer Therapies	A medicine given to treat cancer. This can involve chemotherapy, immunotherapy and targeted therapies.
Targeted Therapies	These are medicines designed to target specific structural changes that only occur within the cancer cells and not in healthy cells. Targeted therapies can include biological therapies that target specific proteins in cancer cells and immunotherapies that help the immune system target cancer cells.
Thermal Ablation	Thermal ablation is the used to treat small kidney cancers by using extreme heat or cold to destroy cancer cells. Thermal ablation includes radiofrequency ablation (RFA), microwave ablation (MWA) and cryoablation.
Toxicity	Harm or side effects associated with treatment.
Tumour	A cluster of abnormal cells.
Upper Tract Urothelial Cancer (UTUC)	Upper tract urothelial cancer is cancer that starts in the upper urinary tract. This is made up of the kidney pipe (ureter) and kidney lining (renal pelvis).