# NHS safety overhaul aims to address deadly delays in cancer treatment for tumour lysis syndrome



At least five cancer patients in England have died following delays or omissions in receiving the emergency medication rasburicase, critical for treating tumour lysis syndrome (TLS), a potentially fatal complication arising from cancer therapies. An independent review of NHS safety incidents found that nine patients who needed rasburicase either did not receive it promptly or at all, leading to severe health deterioration or death. Additionally, three other patients required admission to intensive care due to the lack of timely access to this life-saving treatment.

Tumour lysis syndrome occurs when cancer cells break down rapidly during treatments such as chemotherapy, immunotherapy, or hormone therapy, releasing harmful substances into the bloodstream that can cause dangerous electrolyte and chemical imbalances. This can result in organ damage, particularly to the kidneys and heart. Rasburicase helps high-risk patients, notably those with blood cancers like lymphoma, to clear these substances and safeguard organ function. Yet, the NHS review highlighted persistent issues delaying rasburicase administration, including drug shortages, clinicians’ lack of awareness about the urgency of its use, unclear dosing and monitoring guidelines, and logistical oversights such as inadequate medication storage.

A national patient safety alert issued in September 2025 underscores the gravity of these risks. It revealed that 123 safety incidents involved patients not receiving rasburicase, with 14 delays that may have contributed directly to deaths or significant health decline. One case involved a lymphoma patient with worsening kidney function who was not prescribed rasburicase upon hospital admission, subsequently suffering a cardiac arrest and death the following day. The alert demands that hospitals revise protocols to ensure every blood cancer patient undergoes a TLS risk assessment and, where necessary, receives rasburicase promptly. It also mandates that only trained clinical staff initiate the treatment and have efficient escalation processes for any delays. Adequate stock levels and proper medication storage are emphasized to avoid supply problems that have previously hindered timely treatment.

NHS England’s patient safety notice coincided with updated British Society for Haematology guidelines on TLS management, urging all providers of emergency and cancer services to implement risk assessments, guarantee medication availability, and remove operational barriers within six months. The Specialist Pharmacy Service has also highlighted that delays in administering rasburicase significantly increase risks of acute kidney injury, cardiac arrhythmias, seizures, and sudden death. They recommend improved recognition of the medication’s time-critical nature, better communication, and prompt prescription validation, particularly outside regular hours.

The broader NHS context shows a commitment to enhancing cancer care despite facing challenges such as industrial action and rising demand. Recent government investments have yielded faster cancer diagnosis times—with over 80,000 patients receiving quicker diagnostic outcomes within 28 days—and record numbers of patients diagnosed or ruled out for cancer within similar timeframes. Advanced technologies, including AI systems deployed in radiotherapy departments and real-time patient safety monitoring via AI, are designed to support faster, more accurate treatment and swiftly identify safety risks.

Nonetheless, the tragedies linked to TLS management highlight a critical gap in urgent cancer care safety practices. Experts and NHS officials stress the importance of comprehensive clinician education about TLS risks and treatment urgency, alongside robust inventory controls for essential medicines like rasburicase. The new safety measures and guidelines aim to prevent further avoidable harm, ensuring that patients vulnerable to TLS receive timely, effective treatment.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.independent.co.uk/news/health/cancer-treatment-safety-alert-england-b2825271.html), [[2]](https://www.england.nhs.uk/2025/09/harm-from-delayed-administration-of-rasburicase-for-tumour-lysis-syndrome/), [[3]](https://www.sps.nhs.uk/articles/ensuring-time-critical-use-of-rasburicase/)
* Paragraph 2 – [[1]](https://www.independent.co.uk/news/health/cancer-treatment-safety-alert-england-b2825271.html), [[2]](https://www.england.nhs.uk/2025/09/harm-from-delayed-administration-of-rasburicase-for-tumour-lysis-syndrome/)
* Paragraph 3 – [[1]](https://www.independent.co.uk/news/health/cancer-treatment-safety-alert-england-b2825271.html), [[2]](https://www.england.nhs.uk/2025/09/harm-from-delayed-administration-of-rasburicase-for-tumour-lysis-syndrome/), [[3]](https://www.sps.nhs.uk/articles/ensuring-time-critical-use-of-rasburicase/)
* Paragraph 4 – [[2]](https://www.england.nhs.uk/2025/09/harm-from-delayed-administration-of-rasburicase-for-tumour-lysis-syndrome/), [[3]](https://www.sps.nhs.uk/articles/ensuring-time-critical-use-of-rasburicase/)
* Paragraph 5 – [[6]](https://www.gov.uk/government/news/wait-times-slashed-for-80000-thanks-to-boost-in-cancer-detection), [[7]](https://www.england.nhs.uk/2025/09/record-number-cancer-checks-treatments-despite-strikes/), [[4]](https://www.gov.uk/government/news/world-first-ai-system-to-warn-of-nhs-patient-safety-concerns), [[5]](https://www.gov.uk/government/news/ai-technology-to-help-cut-cancer-waiting-lists)
* Paragraph 6 – [[1]](https://www.independent.co.uk/news/health/cancer-treatment-safety-alert-england-b2825271.html), [[2]](https://www.england.nhs.uk/2025/09/harm-from-delayed-administration-of-rasburicase-for-tumour-lysis-syndrome/), [[3]](https://www.sps.nhs.uk/articles/ensuring-time-critical-use-of-rasburicase/)

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## Bibliography

1. <https://www.independent.co.uk/news/health/cancer-treatment-safety-alert-england-b2825271.html> - Please view link - unable to able to access data
2. <https://www.england.nhs.uk/2025/09/harm-from-delayed-administration-of-rasburicase-for-tumour-lysis-syndrome/> - NHS England issued a national patient safety alert on 9 September 2025, highlighting the risks associated with delayed administration of rasburicase for tumour lysis syndrome (TLS). TLS is a life-threatening emergency that can develop when cancer cells break down rapidly, releasing harmful substances into the bloodstream. The alert requires NHS organisations providing emergency departments and cancer services to implement specific improvements within six months, including updated risk assessment protocols, ensuring medication availability, and addressing operational barriers to timely treatment. The alert coincides with the publication of new British Society for Haematology guidelines on TLS management.
3. <https://www.sps.nhs.uk/articles/ensuring-time-critical-use-of-rasburicase/> - The Specialist Pharmacy Service (SPS) published an article on 6 March 2024, emphasising the importance of timely use of rasburicase in treating tumour lysis syndrome (TLS). Delays in administering rasburicase can lead to severe complications such as acute kidney injury, cardiac arrhythmias, seizures, and sudden death. The article provides mitigation strategies to minimise harm associated with delayed therapy, including ensuring staff recognise the time-critical nature of rasburicase, improving communication and escalation processes, and validating prescriptions promptly, especially during out-of-hours periods.
4. <https://www.gov.uk/government/news/world-first-ai-system-to-warn-of-nhs-patient-safety-concerns> - On 30 June 2025, the UK government announced the development of a world-first AI system designed to scan NHS systems in real time to flag safety issues and trigger crucial inspections earlier. This initiative aims to enhance patient safety by rapidly identifying emerging concerns and enabling swift responses to prevent harm. The AI system is part of the government's 10 Year Health Plan to transform NHS services from analogue to digital, ensuring better and safer care for patients.
5. <https://www.gov.uk/government/news/ai-technology-to-help-cut-cancer-waiting-lists> - On 21 May 2024, the UK government announced the rollout of AI technology to all radiotherapy departments in England, backed by £15.5 million in new funding. This AI system automatically reviews CT or MRI scans, assisting doctors in quickly distinguishing between cancerous cells and healthy organs, thereby preventing damage to healthy tissues during radiation treatment. The implementation of this technology is expected to reduce cancer waiting times by improving the efficiency and accuracy of cancer detection and treatment planning.
6. <https://www.gov.uk/government/news/wait-times-slashed-for-80000-thanks-to-boost-in-cancer-detection> - Between July 2024 and January 2025, 80,000 patients received a quicker diagnosis or ruling out of cancer within 28 days compared to the previous year, thanks to the government's record £26 billion budget investment into the NHS. This initiative aimed to reduce cancer waiting times and improve patient outcomes by increasing funding, resolving strikes, and expanding out-of-hours services. The government also planned to publish a national cancer plan later in the year to further reform NHS cancer care.
7. <https://www.england.nhs.uk/2025/09/record-number-cancer-checks-treatments-despite-strikes/> - In July 2025, NHS staff delivered a record 236,263 cancer diagnoses or ruled-out cases within 28 days, meeting the Faster Diagnosis Standard, despite five days of industrial action. Additionally, 21,633 patients started cancer treatment within 62 days, the highest since the standard's introduction in October 2023. This achievement highlights the NHS's commitment to maintaining high levels of cancer care and treatment, even amid challenges such as industrial action.