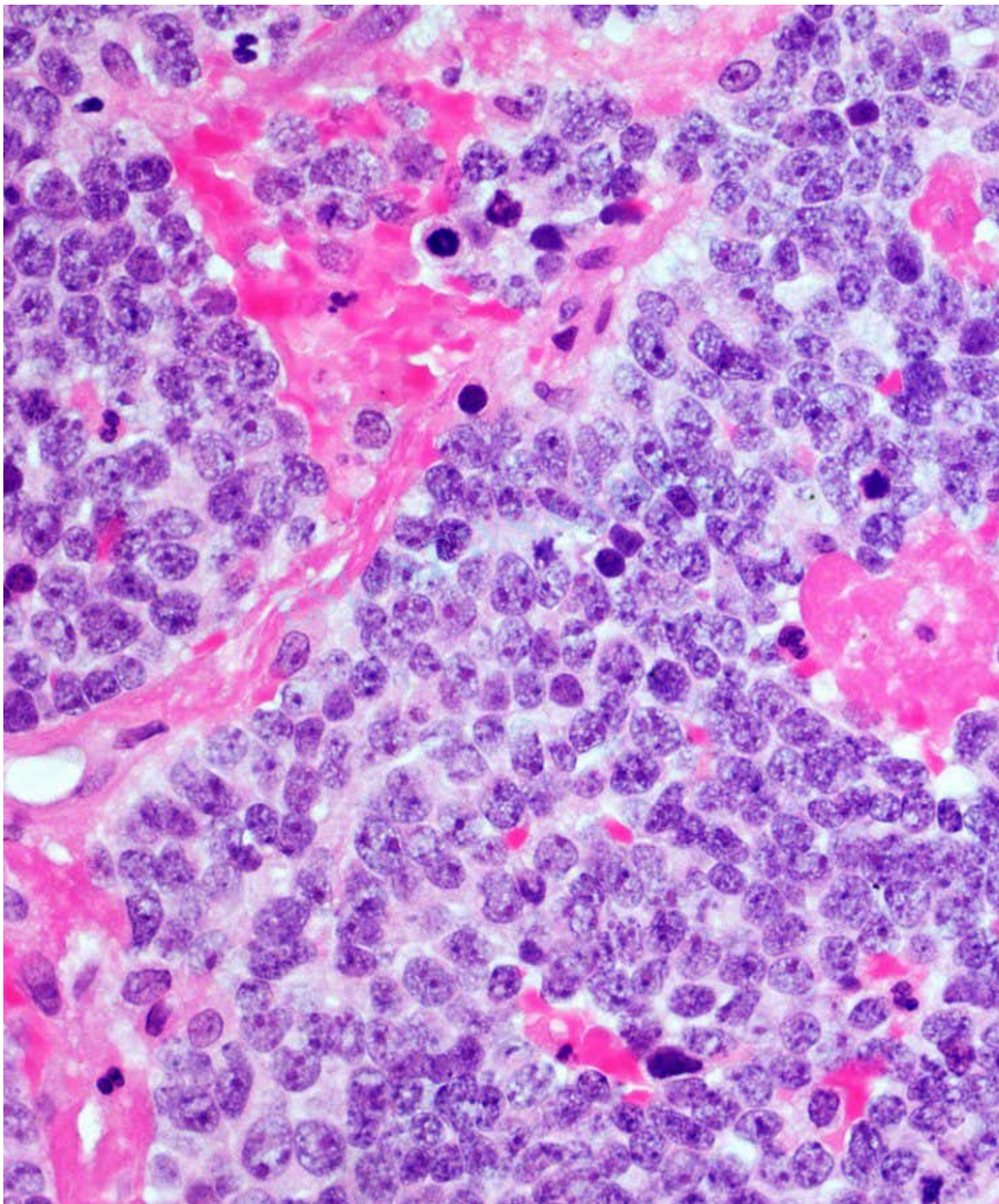# 18-year nerve cancer remission achieved with CAR T-cells

Description

18-year nerve cancer remission achieved with CAR T-cells

A groundbreaking cancer treatment using genetically modified immune cells known as CAR T-cells has achieved an unprecedented milestone by keeping a patient free of a dangerous nerve tumor for 18 years.

Researchers at Baylor College of Medicine in Houston, including Dr. Cliona Rooney, were astonished to discover that a patient treated with CAR T-cell therapy for neuroblastoma in 2005 remained cancer-free after more than 18 years. This remarkable success is quite rare in treating solid tumors like neuroblastoma, which primarily affects young children.

The CAR T-cell therapy involves modifying T-cells from the patient's immune system to specifically target and destroy cancer cells. Although the treatment has shown success in blood cancers like leukemia, its effectiveness against solid tumors has been limited due to the tumors' ability to evade immune attacks.

Dr. Rooney's team continues to research ways to enhance the treatment's potency and reduce side effects, aiming to benefit more patients in the future. Understanding why some patients respond better than others remains a key focus of their investigation.

This achievement in long-term cancer remission provides optimism for the future of cancer treatments, offering hope for improved outcomes and quality of life for patients.

Topics: Cancer treatment, CAR T-cell therapy, Neuroblastoma, Immune system, Research advancements

Vocabulary List:

1. **Groundbreaking** /ˈɡraʊndˌbreɪ.kɪŋ/ (adjective): Innovative and pioneering; introducing new ideas or methods.
2. **Tumor** /ˈtjuː.mər/ (noun): An abnormal mass of tissue that forms when cells grow and divide more than they should which can be benign or malignant.
3. **Astonished** /əˈstɒn.ɪʃt/ (adjective): Very surprised or shocked.
4. **Potency** /ˈpoʊ.tən.si/ (noun): The power or effectiveness of something especially in relation to medical treatment.
5. **Investigate** /ɪnˈvɛs.tɪ.ɡeɪt/ (verb): To carry out a systematic or formal inquiry to discover and examine the facts of an issue.
6. **Remission** /rɪˈmɪʃ.ən/ (noun): A period during which the symptoms of a disease are reduced or disappear.

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. What is the process of making a system more efficient and effective called?

    Option: Authenticity
    Option: Accountability
    Option: Streamline

Option: Cybersecurity

2. What is a small rocky body that orbits the sun called?

Option: Collision
Option: Asteroid
Option: Remission
Option: Surveillance

3. Which term refers to the chance of something happening?

Option: Significant
Option: Opportunity
Option: Likelihood
Option: Compromise

4. What is the process of carrying out a systematic inquiry or examination into something called?

Option: Cybersecurity
Option: Surveillance
Option: Investigate
Option: Encryption

5. What is the process of converting information or data into a code to prevent unauthorized access called?

Option: Remission
Option: Encrypted
Option: Regulation
Option: Tumor

6. What term is used for people who publicly support a particular cause or policy?

Option: Capablities
Option: Profession
Option: Advocates
Option: Groundbreaking

7. What is the action of bringing something to an end or stopping it called?

Option: Groundbreaking
Option: Termination
Option: Concerns
Option: Supervision

8. What does potency refer to in terms of strength or power?

Option: Potency
Option: Accountability
Option: Capabilities
Option: Regulation

9. What is the act of observing and checking the progress or quality of something over a period of time?

Option: Profession
Option: Monitoring
Option: Groundbreaking
Option: Concerns

10. Which term refers to a pledge or promise to do something?

Option: Opportunity
Option: Significant
Option: Commitment
Option: Termination

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. _____ means being answerable for your actions and decisions.

12. The results of the experiment showed a _____ improvement in performance.

13. The consultant provided valuable _____ helping us solve the complex problem.

14. Government agencies enforce _____ to ensure industries operate within set

guidelines.

15. The new software has enhanced our team's _____ to analyze data efficiently.

16. The scientists made a _____ discovery that revolutionized the field of medicine.

17. Managers provide _____ to ensure tasks are completed according to company

standards.

18. The team discussed their _____ regarding the upcoming project deadline.

19. The merger presented an excellent _____ for the company to expand into new

markets.

20. The biopsy confirmed the presence of a malignant _____ in the patient's lung.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. The politician was widely for his controversial statements during the debate.
22. The research team achieved a breakthrough in renewable energy technology.
23. The audience was by the magician's disappearing act.
24. After undergoing treatment the patient's cancer went into .
25. In negotiations both parties may need to make concessions to reach a .
26. Companies invest in measures to protect their digital assets from online threats.
27. Law enforcement agencies conduct to monitor suspicious activities.
28. The training program aims to enhance employees' skills and .
29. Becoming a doctor is a noble that requires years of study and dedication.
30. Users must go through a secure login process for proper before accessing sensitive data.

Answer

Multiple Choice: 1. Streamline 2. Asteroid 3. Likelihood 4. Investigate 5. Encrypted 6. Advocates 7. Termination 8. Potency 9. Monitoring 10. Commitment
Gap-Fill: 11. Accountability 12. Significant 13. Expertise 14. Regulation 15. Capabilities 16. Groundbreaking 17. Supervision 18. Concerns 19. Opportunity 20. Tumor
Matching sentence: 1. Criticized 2. Groundbreaking 3. Astonished 4. Remission 5. Compromise 6. Cybersecurity 7. Surveillance 8. Capabilities 9. Profession 10. Authentication

CATEGORY

1. Sci/Tech - LEVEL3

Date Created
2025/02/18
Author
aimeeyoung99