COVID Infection Could Lead to Tumor Shrinkage, Study Reveals

Description

A new study in the *Journal of Clinical Investigation* shows that severe COVID-19 may help reduce cancer in mice. This is surprising and could change how we think about cancer treatment.

The study looks at special white blood cells called monocytes. These cells are important for fighting infections, but in cancer patients, they can work with tumor cells and protect them.

The researchers found that severe COVID-19 helps the body make a special kind of monocyte. These monocytes can fight both the virus and cancer cells.

The scientists tested this on mice with different types of advanced cancers. They gave the mice a drug that acts like a severe COVID infection. The results were exciting. The tumors in the mice got smaller.

This new way to fight cancer could help people who do not respond to current treatments. However, it is important to say that people should not try to catch COVID to get this benefit. Severe COVID can be very harmful.

This research may lead to new treatments for cancer in the future.

Vocabulary List:

1. **Monocytes** /ˈmoʊ.nə.saɪts/ (noun): A type of white blood cell that plays a role in the immune response.
2. **Tumor** /ˈtuː.mər/ (noun): An abnormal mass of tissue that can be benign or malignant.
3. **Severe** /sɪˈvɪr/ (adjective): Of a serious or critical nature; very intense.
4. **Infection** /ɪnˈfɛkʃən/ (noun): The process of being infected with a disease-causing organism.
5. **Research** /ˈriː.sɜːrtʃ/ (noun): A systematic investigation into and study of materials and sources.
6. **Treatment** /ˈtriːt.mənt/ (noun): The management and care of a patient for the purpose of combating a disease.

Comprehension Questions

Multiple Choice

1. What type of cells did the study focus on?

   Option: Neurons

Option: Monocytes
Option: Beta cells
Option: Fibroblasts

2. What publication featured the study?

Option: New York Times
Option: Journal of Clinical Investigation
Option: Nature
Option: Scientific American

3. Which condition does the study suggest could help reduce cancer in mice?

Option: Diabetes
Option: Severe COVID-19
Option: Heart disease
Option: Hypertension

4. What effect did the drug similar to severe COVID infection have on the tumors in mice?

Option: No effect
Option: Made them grow
Option: Made them smaller
Option: Increased mutation rate

5. Which special kind of monocyte was generated in response to severe COVID-19?

Option: M1 monocytes
Option: M2 monocytes
Option: M3 monocytes
Option: M4 monocytes

6. What could be a potential outcome of this research according to the information provided?

Option: Development of new antibiotics
Option: A cure for the common cold
Option: New treatments for cancer
Option: Elimination of all infectious diseases

True-False

7. Severe COVID-19 had no effect on monocyte function.

8. Monocytes can protect tumor cells in cancer patients.

9. People are encouraged to try to catch COVID-19 in order to reduce cancer.

10. The drug had a negative impact on the size of tumors in mice.

11. The study suggests that the findings may influence cancer treatment strategies.

12. The research provides a definitive cure for all types of cancer.

Gap-Fill

13. Severe COVID-19 helps the body make a special kind of _____ that can fight both the virus and cancer cells.

14. The drug given to the mice acted similarly to a severe COVID infection, resulting in smaller tumors in the mice with different types of advanced _____.

15. This new way to fight cancer could benefit individuals who do not respond to current _____.

16. It is crucial for people not to seek out severe COVID-19 as it can be very _____.

17. The study in the Journal of Clinical Investigation may pave the way for innovative treatments for cancer in the _____.

18. The researchers found that severe COVID-19 helps the body make a special kind of monocyte that can combat both the virus and cancer _____.

Answer

Multiple Choice: 1. Monocytes 2. Journal of Clinical Investigation 3. Severe COVID-19 4. Made them smaller 5. M3 monocytes 6. New treatments for cancer
True-False: 7. False 8. True 9. False 10. False 11. True 12. False
Gap-Fill: 13. monocyte 14. cancers 15. treatments 16. harmful 17. future 18. cells

Vocabulary quizzes

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

1. Which type of white blood cells are responsible for fighting infections?

   Option: Lymphocytes
   Option: Neutrophils
   Option: Monocytes
   Option: Eosinophils

2. What is the application of medical care or therapy for a condition called?

   Option: Prevention
   Option: Diagnosis
   Option: Treatment
   Option: Recovery

3. What force keeps stars and planets in orbit around each other?

   Option: Magnetism
   Option: Friction
   Option: Gravity
   Option: Repulsion

4. Which eye condition is commonly referred to as nearsightedness?

   Option: Hyperopia
   Option: Myopia
   Option: Astigmatism
   Option: Presbyopia

5. What term is used to describe finding or learning about something for the first time?

   Option: Research
   Option: Discovery
   Option: Knowledge
   Option: Study

6. What refers to the application of scientific knowledge for practical purposes especially in industry?

Option: Science
Option: Innovation
Option: Technology
Option: Research

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

7. _____ are constantly working on new studies and experiments to advance scientific knowledge.

8. The _____ provides structural support and protection for the body.

9. A microscope is an essential _____ for studying microscopic organisms.

10. A _____ is an abnormal mass of tissue that may be benign or malignant.

11. The force of _____ pulls objects towards each other.

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

12. The hurricane caused extensive damage and left many people homeless.
13. The surprise party was full of energy and enthusiasm.
14. The old car never broke down and always started on the first try.
15. The theory attempted to explain the origins and nature of the universe.
16. Advancements in this field have transformed the way we communicate and work.

Answer

Multiple Choice: 1. Monocytes 2. Treatment 3. Gravity 4. Myopia 5. Discovery 6. Technology
Gap-Fill: 7. Researchers 8. Skeleton 9. Instrument 10. Tumor 11. Gravity
Matching sentence: 1. Severe 2. Exciting 3. Reliable 4. Cosmic 5. Technology

CATEGORY

1. Health - LEVEL1

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