Biology KS5 marking

(e) In oncolytic virotherapy, viruses that destroy cancer cells are injected into the patient.

Not all types of virus are suitable for this therapy.

Suggest **two** features of a virus that make it suitable fo

Marked work is often an exam question to allow students to develop exam technique.

- It is able to replicate itself to destroy more cells.
- The virus is able to perform lysis on the cancer cell to destroy it.
- Specific to the cancer
- Must not be pathogenic

(Total for Question 7 = 14 marks)

Coded targets are used which are copied and answered by students. Corrections are made based on feedback in green pen.

T5 + T3

T5: Explain how additional T cells will improve the immune response in adaptive cell therapy

↳ Additional T cells means they can bind to more APCs to stimulate B cell divsion and T-killer cell activation more strongly

T3: Explain when passive immunotherapy may be more appropriate than active immunotherapy

↳ Directly stimulating the body's immune response might be less appropriate because it would require more energy. Furthermore, if a person already has the disease, there is no point actively stimulating a response. so it is worse for immunocompromised

Formative corrections are made to answers and students should respond to these in green pen.

for
or

s (such as macrophages
these antigens
to helper T-cells that activate the immune response. T cells and B cells rapidly divide and how?
by releasing cytokines
destroy the foreign proteins through phagocytosis

Biology KS5 marking

Comment on the usefulness of using these chemicals for determining the time of death of rats and pigs.

Use the information in the graphs to support your answer.

(6)

For the graph of pH in the blood, the trend shown is that the pH of the blood decreases for both rats and pigs, as the time after death increases. However, the initial trend is not significant due to overlaps in the error bars for both rats and pigs. Therefore, this is not useful for determining time of death as the results aren't significant. For the level of ammonia in the blood, the error bars don't overlap meaning that the results are significant. The results show that for rats, the level of ammonia increase until 24 hours after death then decrease; whereas the level of ammonia in the blood increases for pigs as time of death increases. This chemical is useful as it has significant results, meaning the results are reliable. For the test of level of lactate significant due to overlaps of error bars. For hypoxanthine levels, the results for rats aren't significant and therefore isn't useful for rats but is useful for pigs as the results are significant (no overlap of error bars). The trend shown that as the time of death increases, levels of hypoxanthine in the blood of pigs increase.

Sample size? Relevance of the points? L2

- The sample size is small therefore may not be significant results
- Overall pigs more useful than rats for results

4

overlap DOES NOT MEAN an ABSOLUTE decision in regards to significance of results.

6-mark questions in assessments are marked in detail and extensive verbal feedback given in lessons.

Students annotate their corrections in green pen.

emical processes that occur to convert

T: interferons topic

P: ATP for explain

T: effect of temp on response to infection.

Targets may be set by students following assessment feedback.

is → polynucleotide

is → α-glucose