

M1.(a) 2-deoxyribose 1

(b) Base A
If Base B stated, allow 1 mark only for response including hydrogen bonding 1

Top N–H forms hydrogen bonds to lone pair on O of guanine 1

The lone pair of electrons on N bonds to H–N of guanine 1

A lone pair of electrons on O bonds to lower H–N of guanine
Allow all 4 marks for a correct diagram showing the hydrogen bonding
Students could also answer this question using labels on the diagram 1

(c) Allow either of the nitrogen atoms with a lone pair NOT involved in bonding to cytosine 1

(d) Use in very small amounts / target the application to the tumour 1

[7]