

Precision Medicine in the Treatment of Bile Duct Cancer

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Background

- **Cholangiocarcinoma** = a rare but aggressive tumour of the bile ducts¹

All cancers have a unique combination of gene changes and there may even be different genetic changes within the same tumour²

- **Actionable alteration** = mutation that plays a biological role in cancer and has a known effect (whether sensitivity or resistance) to a drug³

- **Precision medicine** = cancer treatment that targets certain mutations or genes that are specific to a patient's tumour⁴
- In this study, Next Generation Sequencing (NGS) was used to analyse a patient's genetic information.

Advantages	Disadvantages
Many genes can be tested simultaneously	Expensive
New mutations and markers can be identified to provide other treatment options for patients	Long processing time (2-3 weeks) – normal testing takes less than a week ⁵

Aim & Process

Aim:

- To look at survival of patients with actionable alterations who were treated vs survival of patients with actionable alterations who were not treated

Process:

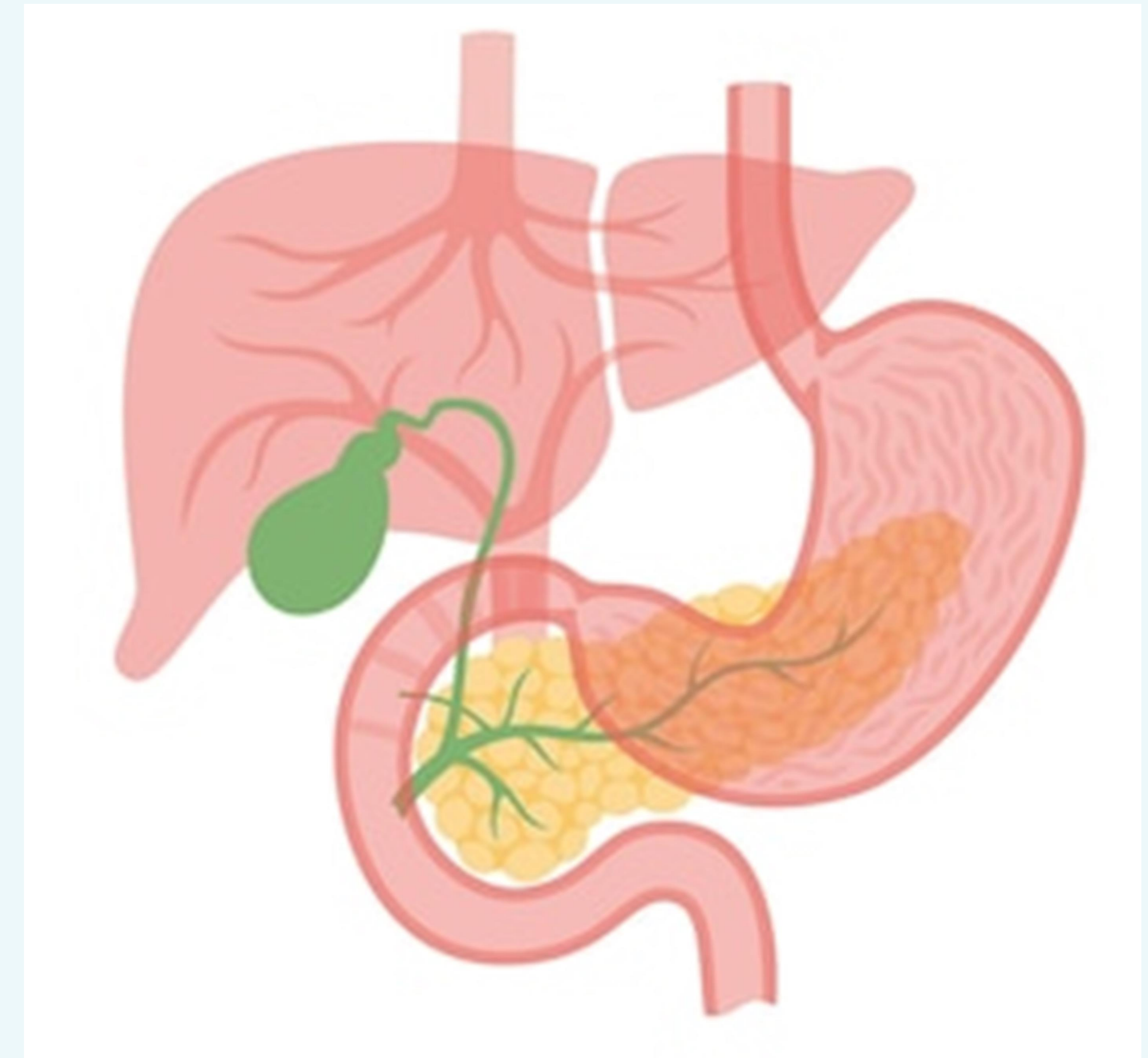
1. Take a look at patients who underwent NGS profiling
2. Note the patients who had an actionable alteration
3. Note the patients who received treatment targeting these actionable alterations
4. Find out the effectiveness of the treatment (how long it helped the patient for and current patient status)

Method

Data to be collected on hospital patient database:

- Patient's response to treatment
- Time to progression (when the treatment began to fail)
- Overall survival of patient

Valuable to also look at the number of NGS tests that failed to determine the effectiveness of NGS



Conclusion

- This is an ongoing study so no conclusions have been reached yet
- It is hoped that the findings of this study will help to improve the outcome of treatments with precision medicine for patients with cholangiocarcinoma and for other types of cancer as well