The HCV Cure: How it Works

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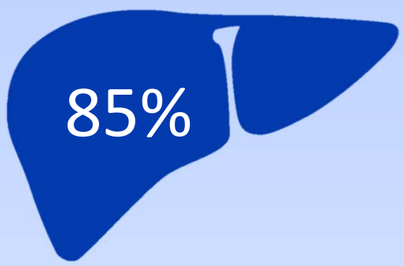

Hepatitis C (HCV) is a viral infection of the liver. Up to 85% of infections become chronic, potentially leading to cirrhosis, liver failure and liver cancer.

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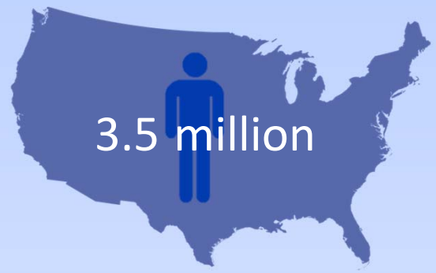

HCV affects >185 million people worldwide. In the US, ~ 3.5 million people suffer from chronic HCV.

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Previous HCV treatment regimens achieved cure in 54-56% of cases at best. In 2011, direct-acting antiviral agents (DAAs) were discovered, which target specific nonstructural proteins that play an important role in the HCV life cycle.

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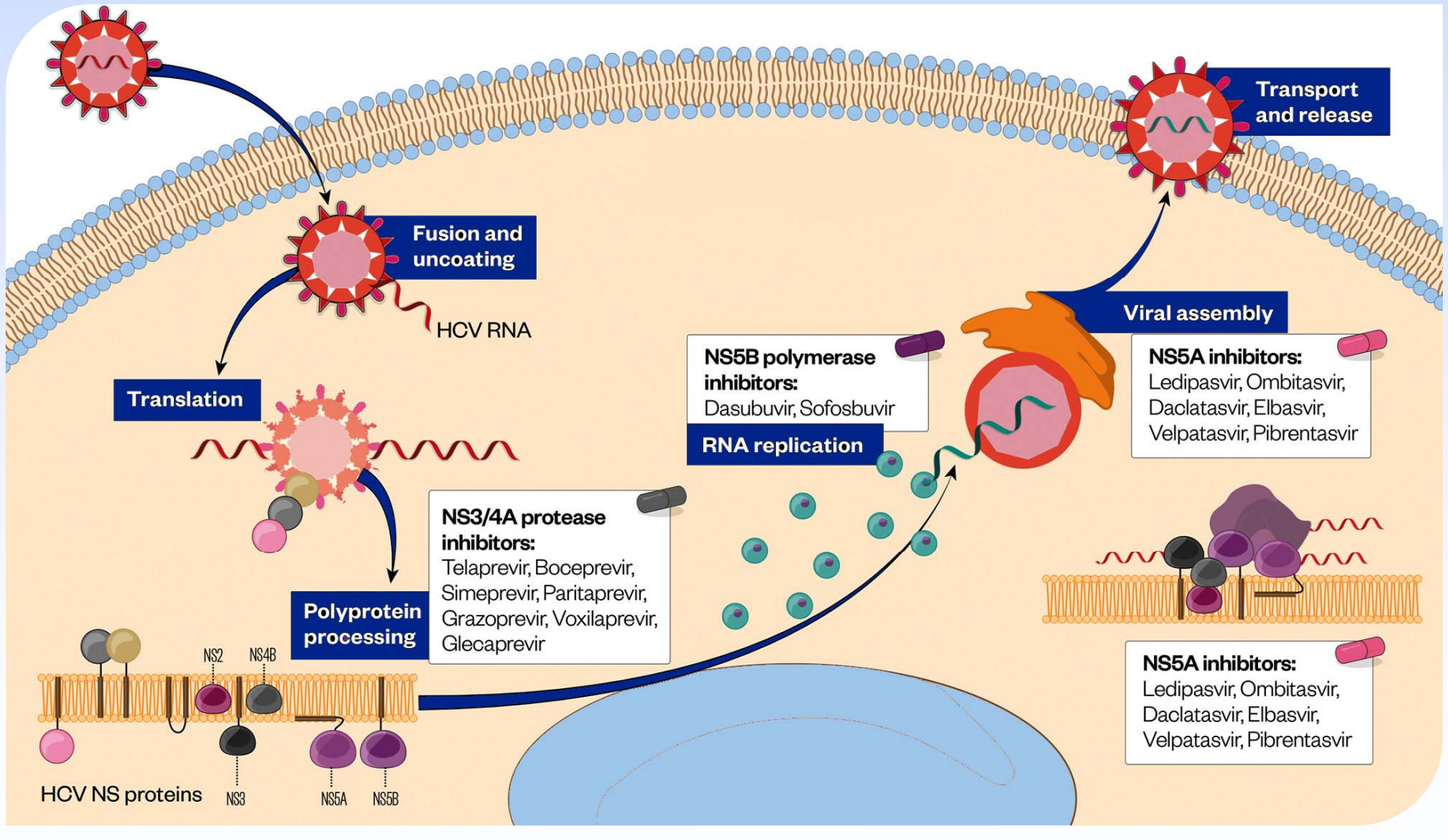

There are four classes of DAAs, defined by their mechanism of action and therapeutic target:

1. Nonstructural proteins 3/4A(NS3/4A) protease inhibitors
2. NS5B nucleoside polymerase inhibitors
3. NS5B non-nucleoside polymerase inhibitors; and
4. NS5A inhibitors.

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The combination of DAAs in a treatment regimen depends on:

- ❑ The type of hepatitis C (There are seven strains)
- ❑ Prior treatment for hepatitis C
- ❑ Degree of liver damage
- ❑ Other health problems
- ❑ Other medications

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Treatment typically involves a combination of 2 or more medications in pill form for 2-3 months.

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Three months after the end of treatment, a blood test is done to confirm cure. The DAAs have cure rates of 94-99%.