

# **The Evolving Role of Dual Combination Therapy by Peginterferon and Ribavirin**

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Chronic hepatitis C virus (HCV) infection, a major health problem all over the world, causes chronic liver disease and subsequently leads to cirrhosis and hepatocellular carcinoma. The prevalence of anti-HCV was around 3-4% in Taiwan and genotype 1 and 2 are the most prevalent HCV genotype. However, some hyper-endemic communities have been found with the anti-HCV positive rates more than 30%. The recent advances of drug therapy for chronic hepatitis C (CHC) have become one of the most important progresses in modern medicine. With the persistent eradication of HCV, the ultimate goals of treatment of HCV infection are to reduce the risk of long-term liver damage and complication. The treatment of chronic hepatitis has evolve with the conventional interferon monotherapy to combination therapy with conventional interferon and ribavirin. With the presence of the pegylated interferon alfa 2a or 2b (PegIFN), the combination therapy of PegIFN and oral ribavirin has been recommended as standard of care for the treatment of chronic hepatitis C (CHC) around the world and Taiwan.

The HCV genotype is one of the most important determinant for response to anti-HCV therapy. The rates of sustained virologic response (SVR) achieved around 77% in patients with HCV genotype 1 and around 95% in genotype 2 infection in Taiwan which was higher than patients in Western countries, and the individualized (or personalized) therapy has become the consensus. The on-treatment predictors, rapid virologic response (RVR) and early virologic response (EVR), have been proved as the most important predictors for SVR and as major determinants of therapeutic regimens. In addition to known pretreatment predictors for SVR including HCV genotype and viral load, some host factors are also important predictors for response to treatment. With the efforts of discovering predictors for response, the treatment of anti-HCV has achieved the rule of individualization and clinical application of the translational medicine. The cost of the combination therapy has been supported by the National Health Insurance with the guideline according to the on-treatment viral kinetics.