Personal Statement from Professor Howard Thomas

I practise within the Liver Unit and Hesketh Hepatology Clinical Research Facility at Imperial Healthcare where my colleagues and I supervise the treatment of around 200 CHC cases per year. The data included in this statement were collated by [redacted].

At any time around 80% of CHC patients are actually in treatment and 20% are being prepared to enter treatment. Our current throughput represents a significant expansion year on year of our practise and we are now one of the largest units in the country. The unit has 4 FTE specialist nurse practitioners and 4.4 FTE consultant hepatologists. The same unit staff also treat large numbers of patients with chronic hepatitis B who are now on long term anti-viral suppressant therapy and are monitored at three monthly intervals for emerging drug resistance.

The majority of our CHC patients were previous IV drug users or were first generation migrants from high prevalence areas of the world such as the Indian continent. Our patients were evenly divided between genotype 1 and non-1 (G1: 46%; G2: 8%; G3: 35%; G4:10%; G5:1%). Prior to treatment the liver biopsy showed mild disease in 30%, moderate disease in 22% and cirrhosis in 18%; 30% were not biopsied. Only 10% of the cases entering treatment were still regular IV drug users on methadone maintenance therapy.

Our sustained viral response rates (G1: 60%; G2/3: 75% G4/5/6: 50%) are above those reported in the registration trials principally, we believe, because we achieve very high compliance and an extremely low frequency of dosage reduction. This is because our nursing team specialise in the management of these cases providing intensive patient support and work with psychiatric input so that depressive problems are minimised. Patients go through medical and nurse run preparation so that their mental and physical state is optimised before they start therapy.

Our specialist approach and the operation of ‘4 week therapy shortening’ and ‘12 week therapy cessation’ rules based on levels of viraemia have a significant effect on the cost effectiveness of the unit when expressed as a cost per SVR achieved.
12 Week Cessation rules are applied in all cases. In essence, those on antiviral therapy who fail to achieve HCV RNA negativity after 12 weeks of treatment are advised to stop treatment because their chance of achieving an SVR is less than 3%. In our cohort of patients, this is the case in 24% of cases who are then spared a further 36 weeks of ineffective therapy.
4 Week Rapid Viral Response rules are also applied to patients with genotype 1 and 4. This involves measuring HCV RNA 4 weeks into therapy. In those that have achieved HCV RNA negativity at 4 weeks the duration of treatment can be shortened from 48 to 24 weeks and still achieve an SVR in over 95% of cases. Over the last 4 years 16% of our cases were suitable for this shortened treatment and all still achieved an SVR. This again substantially improved cost effectiveness.

We have contributed to the evaluation of protease inhibitors as an addition to standard pegylated interferon and ribavirin therapy and believe that these will have a role particularly in genotype 1 and 4 infection, perhaps being added to the therapy of those that have not achieved a rapid viral response on pegylated interferon and ribavirin.

Finally several recent publications have described the association of polymorphisms of the lambda interferon system with response to therapy. This will need to be integrated with viral genotype, rapid viral response and ineffective response algorithms in rationalising treatment to achieve further cost effectiveness advances.

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