$$F(s) = \frac{1}{(s+a)((s+a\cos(\phi))^2 + a^2\sin^2(\phi))((s+a\cos(\varphi))^2 + a^2\sin^2(\varphi))}$$

$$\rightarrow f(t) = Ae^{-at} + \sum_{i=2,3} B_i e^{-r_i t}\cos(c_i t + \gamma_i)$$

Complex poles allows the baseline to be restored much faster.