RESULTS (CONT'D)

- Several different modeling approaches were used to model treatment sequences, indicating the need for and potential application of individual, and cohort state-transition, and decision tree models (Table 2).

- The most commonly used approach was the cohort state-transition model with tracking health states. This model includes a disease state, treatment state, and treatment response. The cohort state-transition model was used in most of the TAs.

- The individual state-transition model was used mainly in diabetes. The individual state-transition model was used mainly in diabetes.

- Decision tree models were used in early TAs, mainly in neurology/mental health disease, with short time horizons. The survival partition model, due to its inherent approach and limitations, was not used in modeling treatment sequences.

- For the studies included in the final phase, the following attributes of the modeling approach were examined: disease-related costs and utilities were mostly determined by disease status.

- In most cases, treatment sequencing was modeled to reflect clinical practice or clinical trial design (Table 3).

- Other reasons included assessing where in a treatment sequence the new treatment belonged or evaluating the addition of more efficacious treatment options to a current treatment sequence. Efficacy did not differ by line of treatment in other disease areas.

- Treatment sequences were modeled to track treatment history and resistance to treatment. Treatment sequences were modeled to track treatment history and resistance to treatment. Treatment sequences were modeled to track treatment history and resistance to treatment. Treatment sequences were modeled to track treatment history and resistance to treatment.

- Efficacy inputs were generally based on trials that considered a single intervention and not a treatment sequence. Efficacy was most commonly assumed to be the same, regardless of line of treatment.

- Alternative clinical inputs at different lines of treatments were informed by trials conducted at the corresponding lines, which was a typical approach used by TA292.

- Disease-related costs and utilities were mostly determined by disease status or disease-related events, and only rarely by line of therapy (Table 3).

- Cost and utility differences were determined by line of therapy in certain oncology TAs only.
References