**Supplement:**

Detailed work process, conducted in 3 steps

*Step 1*

A) Between November 2016 and June 2017, the development of an outcome set was undertaken in one hospital in the Netherlands (Máxima Medical Centre, Eindhoven/Veldhoven). The panel held four in-depth group meetings which each covered a pre-determined goal, e.g. defining the medical condition and most ideal care pathway for patients with MM, identifying outcomes, defining the initial patient conditions, selecting outcomes and case mix domains and determining the timing for data collection. Panellists reviewed the relevant literature and current practices and presented and discussed this during the meetings. Detailed minutes of each meeting were documented. To identify outcomes relevant for patients with MM, multiple information sources were used, starting with discussions with patients. Patients were actively asked to reflect on their experiences to explore what they and patients with MM in general indicated as the most important goals of care. Furthermore, a literature search was conducted on quality outcomes or indicators, HRQoL and PROs in combination with MM. In addition, outcomes defined and registered in the Netherlands Cancer Registry and outcomes currently used in HOVON (Haemato-oncology for adults Netherlands) clinical trials and daily clinical practice in the Netherlands were inventoried. This resulted in a comprehensive list of clinical outcomes and PROs relevant to patients with MM, which was refined during the third and fourth meeting. The result of these four group meetings was a preliminary outcome set with accompanying definitions and instruments.

B) During the first half year of 2018, in three hospitals in the Netherlands (Erasmus MC, Cancer Institute, Rotterdam; Albert Schweitzer, Dordrecht; Amphia, Breda), local MM care pathways were described. Brainstorm sessions by the local hospital teams and patients with MM (attending one of the meetings) resulted in a comprehensive list of clinical outcomes and PROs potentially relevant to patients with MM, this list is presented in Appendix A.

*Step 2*

In October/November 2018, three consensus meetings were held with panellists from all four hospitals to come to a final MM outcome set with accompanying instruments to be used in daily clinical practice. The lists of potential outcomes, defined in step 1A and 1B, were refined to select outcomes that had direct impact on patients, reflect clinical care, and were feasible to measure in routine clinical practice. The final set was approved by all panellists.

*Step 3*

The outcome set was discussed with the national HOVON MM working group. The HOVON gave final approval after which implementation of the set in five hospitals in the Netherlands has started (the four mentioned above and Antonius, Nieuwegein) steering committee checkboard group will monitor the implementation process in these five pilot hospitals, facilitate implementation in other hospitals in the Netherlands and deal with information technology and solutions for mutual benchmarking.

*Participation*

All in-depth group meetings were attended by at least 90% of panellists and the majority of these meetings by all panellists, indicating the willingness and need for an outcome set for patients with MM.