Meet the CML milestones that matter

This is a simplified way to understand chronic myeloid leukemia (CML) treatment milestones. Think of the dots shown in the body as the amount of leukemic cells in the blood, as measured by the presence of the BCR-ABL gene. With each treatment milestone achieved, the amount of leukemia in the body is reduced.

**AT DIAGNOSIS**
The level of BCR-ABL gene in the body is different for every patient at diagnosis, as measured on the International Scale (IS).

**EARLY MOLECULAR RESPONSE (EMR)**
An early molecular response means that the level of BCR-ABL gene in the blood is ≤10% when measured on the IS.

**COMPLETE CYTOGENETIC RESPONSE (CCyR)**
A complete cytogenetic response means that the level of BCR-ABL gene in the blood is equivalent to 1% when measured on the IS.

**MAJOR MOLECULAR RESPONSE (MMR; MR3.0)**
A MMR (or molecular response of 3.0) means that the level of BCR-ABL gene in the blood is ≤0.1% when measured on the IS.

**DEEPER MOLECULAR RESPONSE (DMR; MR4.5)**
A DMR (or molecular response of 4.5) means that the level of BCR-ABL gene in the IS is ≤0.0032% when measured on the IS. It also means that the amount of leukemic cells in the blood is extremely low or nearly undetectable by the most sensitive testing methods currently available. No patients who achieved MR4.5 progressed to advanced stages of the disease in clinical trials, but not all patients may reach this milestone and some patients may reach goals earlier or later than others.

References:
1. Hehlmann, R., et al. Deep molecular response is reached by the majority of patients treated with imatinib, predicts survival, and is achieved more quickly by optimized high-dose imatinib results from the randomized CML-study IV. J Clin Oncol. 10 February 2014; 32(5):495–503.