To analyze the clinical impact of the directed risk-stratification therapy and to evaluate the clinical benefit associated to the discontinuation of the Lenalidomide treatment due to side effects or intolerance.

PURPOSE

To identify genes that may predict response to lenalidomide, we performed targeted next-generation sequencing of a panel of 28 genes recurrently mutated in hematologic malignancies in a cohort of patients with MDS del(5q).

RESULTS

- 69 MDS cases were analyzed by NGS.
- The mutational profile was classified as: high-risk (6), low-risk (21), intermediate risk (18), very high-risk (7) and very low-risk (17). 17 cases were detected as MDS associated to del(5q) and 5 of them showed positive TP53 mutation and were treated with hypomethylating agents instead of Lenalidomide meanwhile 7 of them showed DNMT3A, ASXL1, SF3B1 and TET2 mutations.
- 11 patients with MDS associated to del(5q) were treated with Lenalidomide, the treatment were discontinued in 6 of them due to side effects and the dose reduced in 3 cases due to intolerance.
- The reported side effects were: Grade 4 neutropenia, rhabdomyolysis, erythematous reactions and haemolytic crisis.
- The cost saving associated to the discontinuation of Lenalidomide 10mg was 48,000 euros per patient per year.

CONCLUSION

- The use of NGS allows selecting the mutational profile of each patient, resulting in a change in therapeutic decision-making, the selection of more cost-effective drugs and a directed and personalized treatment.
- Discontinuation of Lenalidomide, due to side effects or intolerance, involves a clinical benefit to patients who maintain a complete haematological response after interruption of the treatment.