Cancer evaluation in Multiple Sclerosis patients: effect on clinical outcomes

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Background. Despite growing understanding of the oncological risk in Multiple Sclerosis (MS), it remains unclear if cancer diagnosis may influence MS clinical course and treatment decision. Aim of our study was to examine the effect of cancer on clinical outcome in a large cohort of patients with MS (PwMS).

Materials. This observational retrospective study screened 2730 patients referring to the MS Center of Catania in the period between 2005 and 2015, with diagnosis of MS according to Mc Donald criteria. The local Ethical committee approved the protocol study and all patients gave their informed consent.

Methods. Clinical and demographical data were collected. All patients underwent a complete neurological examination with Expanded Disability Status Scale (EDSS) score. According to the cancer presence, patients were divided in two groups: K group presenting at least one cancer and no-K group experiencing no cancer. Data about phenotype, onset and site cancer characteristics were collected.

Results. Out of 2730 screened, 1990 MS patients (65.9% females, mean age 52.2±10.8) satisfied the inclusion criteria and were finally enrolled. We found 1914 (98.2%) in no-K group and 76 (1.8%) in K group; of these, 12 (15,8%) presented cancer before and 64 (84,2%) after MS diagnosis. Patients in K group were older than no-K group, with higher age at onset. See figure 2.

Moreover K group showed longer diagnosis of MS lag-time and disease duration, worse mean EDSS with an increased percentage of patients reaching EDSS 4.0 (48.7% vs 33.9%, p<0.01). Lastly, PwMS presenting cancer after the MS diagnosis had shorter time to reach secondary progressive course compared to those with cancer diagnosis prior to MS. See figures 3 and 4.

Conclusion. Our study suggests that PwMS experiencing cancer comorbidity had a worse clinically course compared to PwMS not reporting cancer. Moreover cancer occurring after to MS diagnosis may increase disability accumulation and reduce time-to-reach progressive course.

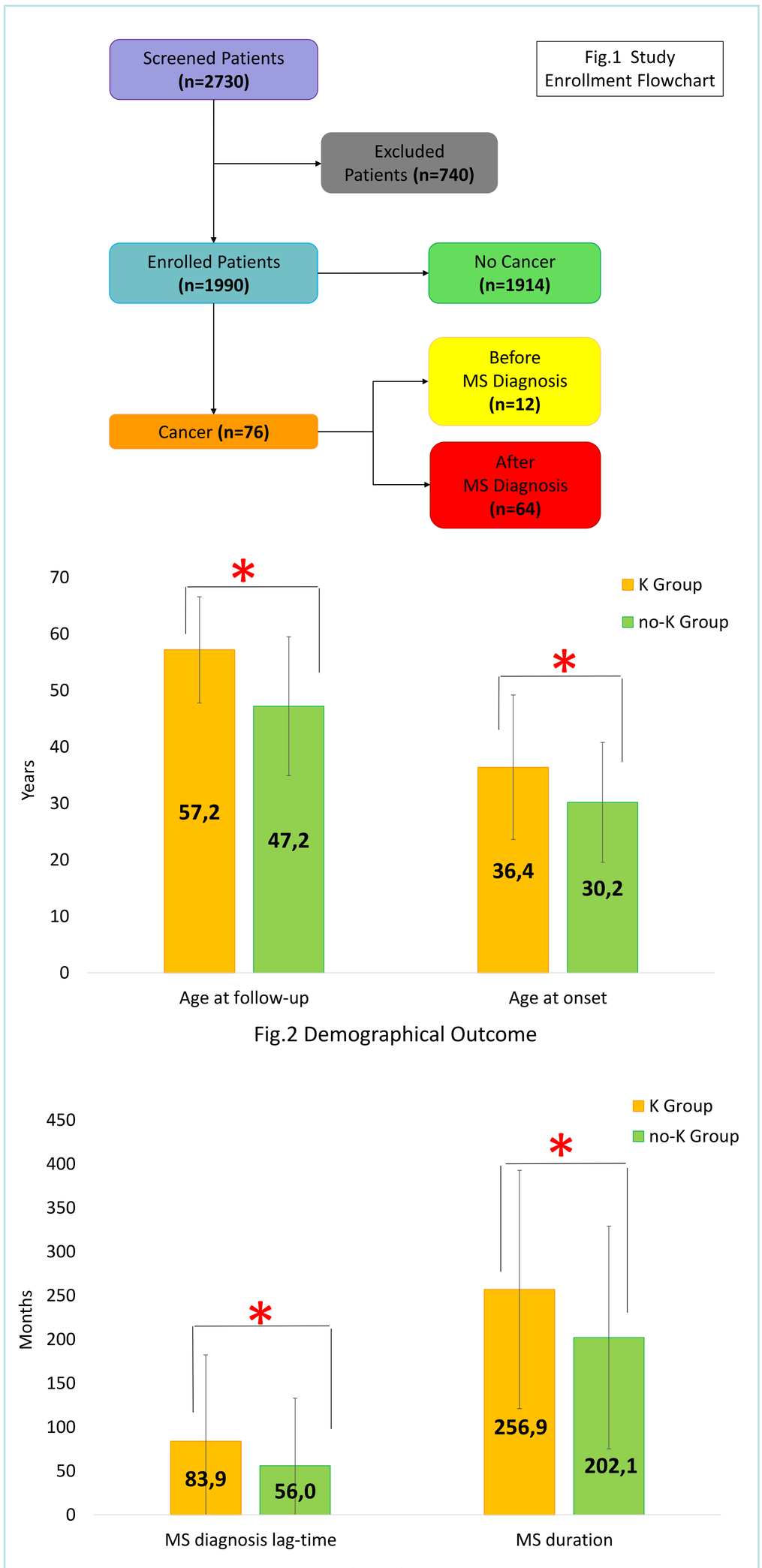

Fig.1 Study Enrollment Flowchart

Fig.2 Demographical Outcome

Fig.3 Clinical Outcome (1)

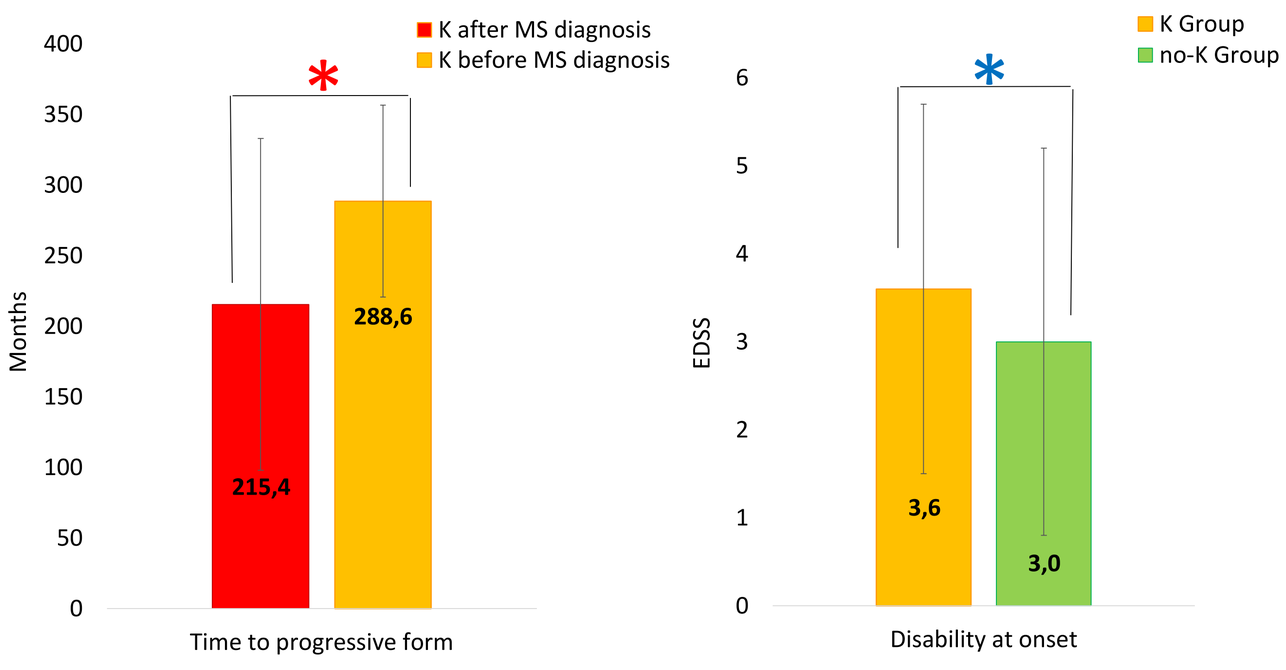

Fig.4 Clinical Outcome (2)

References

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*: < 0.05 *: < 0.01