

Clinical Characteristics of Secondary Myeloid Neoplasms (MNs) in patients with Inflammatory Bowel Disease (IBD)

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Background

- Inflammatory Bowel Disease (IBD) comprises two major disorders: ulcerative colitis (UC) and Crohn's disease (CD).
- Patients with IBD are at an increased risk of cancer secondary to long-standing intestinal inflammation and secondary to immunosuppressive therapies, including but not limited to colorectal cancer, hepatobiliary tract cancer, Hodgkin, and non-Hodgkin lymphomas.
- However, very little data is available regarding the risk of secondary myeloid neoplasm (MNs) in pts with IBD except for the well-known association between azathioprine with therapy related MNs.
- We aim to describe the clinical characteristics of secondary MNs in patients with IBDs

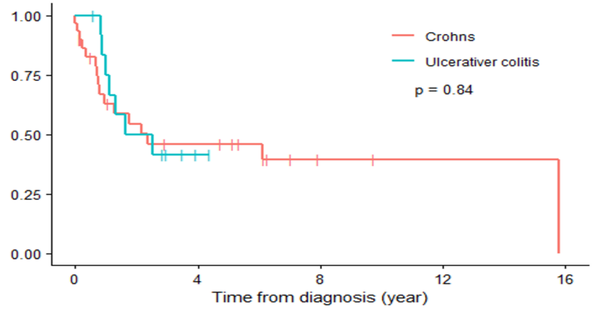
Methods

- Retrospective chart review of patients with MNs who were previously treated for IBDs was performed.
- A descriptive statistic was performed to define the demographics, clinical and biological characteristics of the pts included in the study.

Results

Patient Characteristics	Result
Age, Median [Range]	59 yrs [23-83]
Gender, No. (%)	
Female	27 (63)
Male	16 (37)
IBD diagnosis	
CD	30 (70%)
UC	13 (33%)
MN Diagnosis, No. (%)	
AML	32 (73)
MDS	9 (21)
MDS-MPN	1 (3)
CMML	1 (3)
Cytogenetic, No. (%)	
Diploid	13 (30)
Complex	13 (30)
CBF	6 (14)
Mutations, No. (%)	
TP53	10 (23)
RAS	8 (19)
FLT3	7 (16)
TET2	7 (16)
DNMT3A	6 (14)

- 43 pts were identified to have developed a secondary MN during or after the treatment of IBDs between 2012 – 2020.
- Seventy percent (30/43) of the secondary MNs arose after the therapy for CD, whereas 30% (13/43) arose after UC therapy.
- Twenty-five pts were on active treatment for IBD at the time of MN diagnosis (9 on biological agent, 11 on mesalamine, and 2 on azathioprine), whereas 18 were in remission.
- Eight pts (19%) had secondary cancer before the MN diagnosis (2 pts lymphoma, 2 pts skin cancer, ovary Ca, uterine Ca, schwannoma, and adrenal tumor).
- 3 of 8 pts received therapy for cancer (chemotherapy and/or radiation therapy).
- **All the pts with CBF-AML had prior history of CD**, two of them treated with anti TNF-α treatment.
- The median overall survival was 2.17 years for the whole cohort, and **there was no difference in OS between MNs arose from CD and UC**
- 17 patients underwent allogenic stem cell transplantation, which resulted in remission of IBDs in 13 pts (76%).



Summary

- Secondary MNs after IBD therapy included higher than expected prevalence of core-binding factor AML, which was strongly associated with prior history of CD.
- This observation raises an important question about the association between CD and CBF-AML.
- Of interest, allogeneic stem cell transplantation led to remission of both MNs and IBDs, highlighting the role of allo SCT in autoimmune diseases.