terial species making up the gastrointestinal microbiota. However few data exist on differences in gut microbiota composition in GI diseases, such as IBD, IBS and diverticular disease compared to healthy controls.

**Aim and Methods:** Aim of our study was to evaluate the differences in gut microbiota composition between IBD, IBS and diverticular disease (DD) patients. 10 Crohn Disease (CD), 5 Ulcerative Colitis (UC), 4 DD, 3 IBS patients, and 8 controls (CD) were enrolled and fecal samples collected from each. Microbiota composition was assessed by a metagenomic gene-targeted approach (16S rRNA) using the Roche 454 GS Junior, following DNA isolation from stool samples stored at 80 °C. Data were analyzed in Qiime. Individual species richness was estimated using Chao 1 alpha-diversity index. We also explored the differential relative abundance of several taxa of interest, selected according to literature.

**Results:** Bacteria amplicons were detected in all samples. Prevalent classes of bacteria were: Bacteroidia (min 13.06% - max 91.55%), Firmicutes (min 7.44% - max 86.10%) and Proteobacteria (min 0.48% - max 46.48%). Fusobacteria were found only in CD and DD patients (min 0.67% - max 50.71%). IBD microbiota composition differed significantly compared to all other. In particular, UC patients showed a reduced concentration in Bacteroidetes and an increased presence of Firmicutes vs CT, DD and IBS. On the other side, Bacteroidetes and Firmicutes composition varied among CD patients, being increased or reduced when compared to the other groups. Proteobacteria were increased in all disease group compared to CT, being more represent- ed in CD and IBS.D. Moreover, Actinobacteria were decreased in IBD and DD vs. IBS and CT. The most represented species in IBD and DD vs. other groups was Collinsella Aerofaciens. Rikenellaceae were suppressed in IBD patients, as well as Peclabacterium Prausnitzii. Akkermansia Muciniphila was present only in IBS patients. Enterobacteriaceae were increased only in CD patients vs. other groups. Finally, while cao 1 score was similar between CT, IBS and DD, it was deeply reduced in IBD patients.

**Conclusions:** These preliminary data show that starting from microbiota, gastro-intestinal disease represent a spectrum of continues diseases where IBD display one extreme in gut microbiota composition while controls display the other. Furthermore, GI diseases share some microbial patterns, sharing perhaps common pathophysiological pathways. New analyses are needed to confirm this hypothesis and evaluate therapeutical implications.

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**Role of BMI, use of immune suppressant and pharmacokinetic of infliximab-pathway in determining prospective and retrospective response to the drug in cohort of IBD patients under maintenance therapy with Infliximab**

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**Introduction:** Response to infliximab (IFX) depends on use of immune suppressant and BMI/body fat content. Few informations however exist on how these factors interact with pharmacokinetics of IFX.

**Aims and Methods:** Assess a possible correlation between BMI, body fat and use of immunosuppressants with serum IFX, TNF-α and IFX before and after drug administration (trough levels, post-infusion levels). Assess a possible correlation between the serum concentrations of IFX, TNF-α and IFX before and after drug administration (trough levels, post-infusion levels) with the prospective and retrospective clinical response.

**Results:** 12 CD (DD) patients and 12 ulcerative colitis (UC) patients, in maintenance treatment with IFX, for at least 14 weeks. Blood samples were collected from each patient before infusion of the drug (trough levels) and half hour after the end of the infusion (post-infusion levels). Clinical data were registered 2 months before the infusion (for retrospective analysis) and also 2 months following the infusion (prospective analysis). Trough levels and post-infusion levels of infliximab, TNF-α and anti-infliximab (ATI) were measured by ELISA (Immunodiagnostik). Body fat levels were measured by DEXA.

**Results:** As expected, higher BMI and body fat levels were associated to reduced response to IFX. Higher IFX trough levels correlated to retrospective response to IFX. ATI associated to lower IFX trough levels and also post-infusion levels. BMI and body fat levels correlated to IFX postinfusion levels, suggesting that IFX does not distribute in the adipose tissue. Patients under immunosuppressant display higher IFX post-infusion levels and reduced ATI levels. The ration between IFX trough levels/TNF-α trough levels predicted the response to IFX at 2 months following IFX infusion.

**Conclusion:** Patients lacking response to IFX have higher values of body fat and BMI, which directly influence IFX post infusion levels, suggesting that the drug does not distribute in adipose tissue. Immunosuppressants also associate to higher IFX post infusion levels but with lower ATI levels. Finally, for the first time, our study showed that the ratio between IFX-trough-levels and TNF-α-trough levels in serum, predict clinical response to the drug at 2 months. If confirmed in wider population, the last is a good parameter in order to promote a personalized therapy, based on the study of a specific pathogenic pathway.

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**Role of age at diagnosis and clinical type of coeliac disease in the incidence of complicated coeliac disease**

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**Background and Aims:** Coeliac disease (CD) is a chronic enteropathy characterized by an increased mortality mainly due to its complications, i.e refractory CD, abdominal lymphomas, and small bowel carcinoma. Recently, it was shown that overall annual incidence of these complications in CD patients is 0.2% [1]. However, some evidence suggests that risk of developing complications varies in different type of coeliac patients, type of clinical presentation and age at diagnosis of CD being the most important discriminant factors. To calculate the risk of developing complications according to type of clinical presentation and age at diagnosis of CD.

**Methods:** The data obtained from our previous study [1] were reanalysed to calculate the incidence of complicated CD among coeliac patients according to type of clinical presentation and age at diagnosis of CD.

**Results:** Between Jan 1999 and Oct 2011, 14 (11 F, mean age at diagnosis of complication 61±12 yrs) out of 1840 coeliac patients (1379 F, mean age at diagnosis of CD 35±11 yrs) developed complications (5 refractory CD type I, 2 refractory CD type II, 2 ulcerative jejunal-ileitis, 3 small bowel adenocarcinomas, 1 B-lymphoma, 1 enteropathy-associated T-cell lymphoma). Relative risk of complications was found to be directly related to age at diagnosis of CD: it was 4.8 for patients diagnosed at age of 30 years, 13.5 at 50 years, and 38.1 at 70 years. 622 out of 1840 coeliac patients were affected by a classical major form of CD and 13 of them developed complications. Relative risk for these patients was much higher and again it was directly related to age at diagnosis of CD: it was 21.7 for patients diagnosed at age of 30 years, 168.7 at 50 years, and 1311.5 at 70 years.

**Conclusions:** Risk of developing complications in coeliac patients is strongly linked to age at diagnosis and type of clinical presentation of CD. So, follow-up modalities of coeliac patients will have to be tailored according to these individual parameters.

**Bibliography:**

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**Pyogenic liver abscess in one Italian centre over a 14-years period**

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