Background: Inflammatory bowel disease (IBD) such as Crohn’s disease (CD) and ulcerative colitis (UC) is associated with decreased mineral density caused by chronic inflammation and corticosteroid use. However, the increase of fracture risk is unknown and differs according to studies.

Objectives: The aim of our study is to assess the risk of fracture and low bone mineral density (BMD) in patients with IBD compared to the general population.

Methods: A systematic search of literature up to 1st February 2017 was conducted using databases including: MEDLINE (via PUBMED), EMBASE, the Cochrane library and abstracts from the ACR, ASBMR and EULAR congresses from 2014 to 2016. Prospective and retrospective cohort studies were included if they reported the incidence of fractures and/or the measure of BMD by dual energy X-ray absorptiometry (DEXA) (expressed in g/cm2) in IBD patients in comparison with healthy controls. Meta-analysis was performed to assess odds-ratios (OR) for each studied group using the inverse variance approach to estimate disparity with healthy controls. Meta-analysis was performed to assess odds-ratios (OR) for each studied group using the inverse variance approach to estimate

Results: The literature search identified 1165 articles and no congress abstracts. A manual search did not retrieve any articles. Finally, 25 studies met the inclusion criteria. 9 of them reported 2065 fracture events among 42,615 IBD patients and 4625 fracture events among 20,340 healthy controls. Global risk of fracture was increased in IBD patients compared with controls with pooled OR at 1.50 (95% CI: 1.10 to 2.05; p=0.01). The pooled OR of vertebral fracture was 2.26 (95% CI: 1.04 to 4.90; p<0.001). Fracture risk was not significantly increased for any other site (arm, hip, wrist). The analysis of 17 studies concerning BMD showed the significant decrease of BMD and Z-score at three sites. At femoral neck, mean difference (MD) of BMD was -0.05 (95% CI: -0.08 to -0.02; p=0.001) and MD of Z-score (-0.39 P<0.00001). At femur, this values was respectively -0.08 (95% CI: -0.11 to -0.05, p=0.00001) and -1.01 (95% CI: -1.52 to -0.50; p=0.07), and at lumbar spine -0.06 (95% CI: -0.10 to -0.03, p=0.0003) and -0.51 (95% CI: -0.68 to -0.34; p<0.0001).

Conclusions: IBD patients have an increased risk of fractures, especially vertebral ones, suggesting the need for regular follow-up and preventing measures.

Disclosure of Interest: None declared