Table 1. ECCO overview of risks of drugs during pregnancy and lactation.

Drug	During pregnancy	During lactation
Mesalazine	Low risk	Low risk
Sulphasalazine	Low risk	Low risk
Corticosteroids	Low risk	Low risk
Metronidazole	Low risk*	Avoid
Ciprofloxacin	Avoid in T1*	Low risk[a]
Thiopurines	Low risk	Low risk
Thiopurines + allopurinol	Limited data	Limited data
Ciclosporin **Tacrolimus**	Low risk, limited data	Limited data
Anti-TNF	Low risk	Low risk
Vedolizumab	Low risk, limited data	Low risk, limited data
Ustekinumab	Low risk, limited data	Low risk, limited data
Methotrexate	Contraindicated	Contraindicated
Thalidomide	Contraindicated	Contraindicated
Tofacitinib	Contraindicated	No data; avoid
Filgotinib	Contraindicated	No data; avoid
Ozanimod	Contraindicated	No data; avoid

TNF, tumour necrosis factor.
[a]May be considered for short-term course for perianal disease; if possible consider other alternatives.

thus increase the risk of an unfavourable pregnancy outcome.[212,213] A recent analysis from the prospective PIANO registry reported on 432 mothers who were exposed to steroids during pregnancy. After adjusting for other variables, corticosteroid use was associated with increased risk of preterm birth, LBW, IUGR, and neonatal intensive care unit admission. Exposure to corticosteroids during T2 or T3 was associated with serious infections in infants at 9 and 12 months. A limitation of this cohort study is that disease activity was monitored using self-reported questionnaires and not objective markers of inflammation, thus making it difficult to separate the contribution of disease activity itself from steroid exposure.[214] Nonetheless, these data emphasise the importance of adequate disease control during pregnancy and steroid-sparing strategies.

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Although short-term corticosteroids, including budesonide, can in general be regarded as low-risk during pregnancy for managing flares, the risk of maternal-fetal complications should be considered [EL3]

c] Antibiotics

The role of antibiotic therapy in the treatment of IBD is very limited. Metronidazole and ciprofloxacin are the most frequently used antibiotics in the treatment of selected clinical conditions, such as pouchitis and perianal or abdominal sepsis in patients with CD.[215]

There are minimal data on the efficacy and safety of antibiotic use in pregnant patients with IBD. In fact, in this specific situation, this use is largely based only on data from series that do not include pregnant patients with IBD.

Although a case-control study reported cleft defects associated with metronidazole exposure,[216] two historical meta-analyses[217,218] and a retrospective cohort study[219] showed no association between metronidazole treatment in different trimesters with development of preterm birth, LBW, or congenital anomalies.[219] A review of evidence, including cohort studies, case-control studies, and meta-analyses, confirmed no relationship between metronidazole exposure during pregnancy and risk of preterm delivery and birth defects.[220]

An association between quinolones and musculoskeletal abnormalities has been shown in animal studies. Moreover, due to their high affinity for bone and cartilage, fluoroquinolones may cause arthropathy in children. For this reason, this class of antibiotics should be avoided during the first 3 months of pregnancy. However, as reported by three meta-analyses,[221–223] exposure to quinolone, fluoroquinolone, or ciprofloxacin was not associated with a significant increase in major congenital malformations and adverse pregnancy outcomes during T1. Moreover, in a small case series of pregnant patients with IBD, both metronidazole and ciprofloxacin were not associated with poor pregnancy outcomes.[223] Thus, considering the limited available data, a short course of ciprofloxacin may be considered if needed during T1.

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In case of perianal or abdominal sepsis or pouchitis, metronidazole and ciprofloxacin can be administered in patients with IBD during pregnancy. However, given the risk of arthropathies in children, ciprofloxacin should be avoided if possible during the first trimester of pregnancy [EL4]

d] Thiopurines

Controlled trials and meta-analyses have not reported an increased risk for adverse pregnancy outcomes in patients with IBD treated during pregnancy with thiopurines compared with pregnancy outcomes of patients with IBD not treated with thiopurines.[171,179,200,224–232] The PIANO study also revealed that thiopurine therapy or combination therapy with biologics during pregnancy was not associated with increased