## Supplementary

Supplement, Table 1 Biological drugs approved for the treatment of IBDs in Italy

Biological drugs approved for IBDs in Italy	Therapeutic class	Indications for use approved for IBDs	Other indications foruse approved in Italy
Infliximab	TNF-alpha inhibitors	Adult Crohn's disease:  • treatment of moderately to severely active Crohn's disease, in adult patients who have not responded despite a full and adequate course of therapy with a corticosteroid and/or an immunosuppressant; or who are intolerant to or have medical contraindications for such therapies;  • treatment of fistulising, active Crohn's disease, in adult patients who have not responded despite a full and adequate course of therapy with conventional treatment (including antibiotics, drainage and immunosuppressive therapy).  Paediatric Crohn's disease: treatment of severe, active Crohn's disease, in children and adolescents aged 6 to 17 years, who have not responded to conventional therapy including a corticosteroid, an immunomodulator and primary nutrition therapy; or who are intolerant to or have contraindications for such therapies. Infliximab has been studied only in combination with conventional immunosuppressive therapy.  Adult ulcerative colitis: treatment of	RA, PsA, AS, PsO
		moderately to severely active ulcerative	

		colitis in adult patients who have had an inadequate response to conventional therapy including corticosteroids and 6-mercaptopurine (6-MP) or azathioprine (AZA), or who are intolerant to or have medical contraindications for such therapies.  Paediatric ulcerative colitis: treatment of severely active ulcerative colitis, in children and adolescents aged 6 to 17 years, who have had an inadequate response to conventional therapy including corticosteroids and 6-MP or AZA, or who are intolerant to or have medical contraindications for such therapies.	
Adalimumab	TNF-alpha inhibitors	Adult Crohn's disease: treatment of moderately to severely active Crohn's disease, in adult patients who have not responded despite a full and adequate course of therapy with a corticosteroid and/or an immunosuppressant; or who are intolerant to or have medical contraindications for such therapies;  Paediatric Crohn's disease: treatment of moderately to severely active Crohn's disease in paediatric patients (from 6 years of age) who have had an inadequate response to conventional therapy including primary nutrition therapy and a corticosteroid and/or an immunomodulator, or who are intolerant to or have contraindications for such therapies.	RA, PsA, AS, JIA, PsO, Uv, HS

		Adult ulcerative colitis: treatment of moderately to severely active ulcerative colitis in adult patients who have had an inadequate response to conventional therapy including corticosteroids and 6-mercaptopurine (6-MP) or azathioprine (AZA), or who are intolerant to or have medical contraindications for such therapies;  Paediatric ulcerative colitis: treatment of moderately to severely active ulcerative colitis in paediatric patients (from 6 years of age) who have had an inadequate response to conventional therapy including corticosteroids and/or 6-mercaptopurine (6-MP) or azathioprine (AZA), or who are intolerant to or have medical	
Golimumab	TNF-alpha inhibitors	contraindications for such therapies.  Adult ulcerative colitis: treatment of moderately to severely active ulcerative colitis in adult patients who have had an inadequate response to conventional therapy including corticosteroids and 6-mercaptopurine (6-MP) or azathioprine (AZA), or who are intolerant to or have medical contraindications for such therapies.	RA, PsA, AS, JIA
Vedolizumab	Anti-integrins	Adult Crohn's disease: treatment of adult patients with moderately to severely active Crohn's disease who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a tumour necrosis factor-alpha (TNFα) antagonist.	-

		Adult ulcerative colitis: treatment of adult patients with moderately to severely active ulcerative colitis who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a tumour necrosis factor-alpha (TNFα) antagonist.	
Ustekinumab	Interleukin inhibitors	Adult Crohn's disease: treatment of adult patients with moderately to severely active Crohn's disease who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a TNFα antagonist or have medical contraindications to such therapies.	PsO, PsA
		Adult ulcerative colitis: treatment of adult patients with moderately to severely active ulcerative colitis who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a biologic or have medical contraindications to such therapies.	

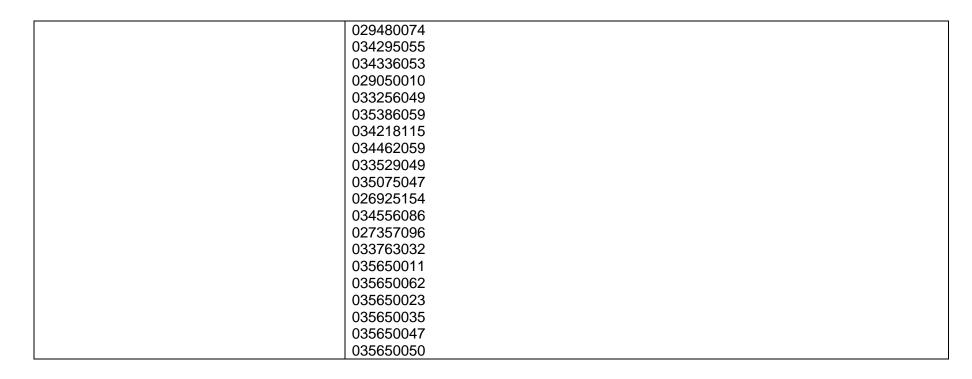
**Abbreviations:** IBDs= inflammatory bowel diseases; TNF= tumor necrosis factor; RA= Rheumatoid arthritis; PsA= Psoriatic arthritis; AS= Ankylosing spondylitis; PsO= Psoriasis; JIA= Juvenile idiopathic arthritis; Uv=Uveitis; HS= Hidradenitis suppurativa.

## Supplement, Table 2 NDC of mesalazine with specific indication for use for UC, according to Italian SmPCs

Formulations	NDC
TABLETS 1200 MG	037734023
	037734011
ENEMAS 2G	027357108
	035358035
	035356031
	033081023
	026416216
ENEMAS 2G/30ML	027308042
ENEMAS 2G/50ML	034462034
	026416141
	035386046
	034295030
ENEMAS 4G	034836039
	035358047
	035356043
	033081035
	026416230
ENEMAS 4G/50ML	026416166
	029050034
ENEMAS 4G/100ML	033529037
	033760344
	033256037
	035386034
	029480047
	033292018
	026416154
	029050046
ENEMAS 4G/60ML	027308055
	027357110

VIALS 2G/50ML	034218091
VIALS 4G/100ML	034218103
	034295042
RECTAL GEL 10%	035356056
	035358050
RECTAL GEL 2G	029480023
	034556023
RECTAL GEL 4G	034556035
	029480035
RECTAL GEL 500MG	033081050
	035592017
	034757043
	026925180
	027122151
	034390029
	034218040
GRANULES FOR RECTAL SUSPENSION	026416091
2G	
GRANULES FOR RECTAL SUSPENSION	026925038
1,5G	027122112
RECTAL 100ML	034462046
RECTAL 2G/50ML	034254033
RECTAL 4G/60ML	035075035
RECTAL 4G/100ML	034254045
RECTAL 500ML	032890028
RECTAL FOAM 14G	026925127
RECTAL FOAM 28G	026925115
RECTAL FOAM 2G	026925089
	032890030
	027122136
	034218065

RECTAL FOAM 4G	026925077
	027122148
	034218053
RECTAL FOAM 1G	026416267
	026416279
RECTAL SUSPENSION 1,5G	034218038
RECTAL SUSPENSION 1G/100ML	027130020
RECTAL SUSPENSION 2G	027122062
	034836027
	034757029
RECTAL SUSPENSION 2G/100ML	027130032
RECTAL SUSPENSION 2G/50ML	034556062
	034298036
	034336038
RECTAL SUSPENSION 4G	027122098
	034757031
	026925141
RECTAL SUSPENSION 4G/100ML	027130044
	034556074
	034336040
	034298048
RECTAL SUPPOSITORY 1G	026416305
	027130069
RECTAL SUPPOSITORY 400MG	027122011
	027122023
	027122035
RECTAL SUPPOSITORY 500MG	034254058
	026416127
	026416139
	034298051
	033292044
	027308067



**Abbreviations:** NDC = National drug code; SmPC= summary of product characteristics.

**Supplement, Table 3** Number of true positive, false positive, true negative and false negative cases for each algorithm developed for identification of the 83 CD patients

Algorithms	TP	FP	TN	FN
1	76	10	530	7
2	76	12	528	7
3	82	15	525	1
4	59	11	529	24
5	80	12	528	3

**Legend**= CD= Crohn's Disease; FN= false negative; FP= false positive; TN= true negative; TP= true positive.

**Supplement, Table 4** Number of true positive, false positive, true negative and false negative cases for each algorithm developed for identification of 51 UC patients

Algorithms	TP	FP	TN	FN
1	46	45	527	5
2	47	47	525	4
3	48	48	524	3
4	33	35	537	18
5	38	21	551	13

**Legend**= FN= false negative; FP= false positive; TN= true negative; TP= true positive; UC=ulcerative colitis.