# *Supplementary information 3. List of excluded studies*

## Prognostic accuracy and clinical impact studies

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| Study | Reason for exclusion |
| Beaven 20041 | Not systematic review. |
| Dotan 20062 | Incorrect biomarker panel (assesses only 4 of the 6 biomarker panel forming the IBDX kit). |
| Dotan 20103 | Incorrect biomarker panel (assesses only 4 of the 6 biomarker panel forming the IBDX kit). |
| Fengming 20144 | Not systematic review. |
| Gasparetto 20185 | Conference abstract with insufficient information reported to include in review.  |
| Halder 20106 | Kit used to assess biomarker panel not in the scope of this review. |
| Koutroubakis 20117 | Incorrect biomarker panel (assesses only 4 of the 6 biomarker panel forming the IBDX kit). |
| Lee 2011a8 | Related to PredictSURE-IBD: describes development of tool rather than prognostic accuracy or clinical impact. |
| Lee 2011b9 | Related to PredictSURE-IBD: describes development of tool rather than prognostic accuracy or clinical impact. |
| Lee 2011c10 | Related to PredictSURE-IBD: describes development of tool rather than prognostic accuracy or clinical impact. |
| Lee 201211 | Related to PredictSURE-IBD: describes development of tool rather than prognostic accuracy or clinical impact. |
| Lee 2017a12 | Related to PredictSURE-IBD: describes development of tool and results that pre-date the full publication. |
| Lee 2017b13 | Related to PredictSURE-IBD: describes development of tool and results that pre-date the full publication. |
| Lee 2017c14 | Related to PredictSURE-IBD: describes development of tool and results that pre-date the full publication. |
| Lyons 201915 | Related to PredictSURE-IBD: editorial that describes development of tool rather than prognostic accuracy or clinical impact. |
| Papp 201416 | Not systematic review. |
| Rieder 201117 | Conference abstract with insufficient information reported to include in review. |
| Rieder 201318 | Incorrect intervention and not question of interest to this review: assesses link between gene profiling and biomarker panel. |
| Ryan 201319 | Kit used to assess biomarker panel not in the scope of this review. |
| Simondi 200820 | Incorrect biomarker panel (assesses only 4 of the 6 biomarker panel forming the IBDX kit). |

## Economic evaluations of treatments for Crohn’s disease

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| Study | Reason for exclusion |
| Aliyev et al. 201821 | Conference abstract with insufficient detail |
| Ananthakrishnan et al. 201322 | Irrelevant comparison (mucosal healing v clinical response to escalate dose) |
| Arhan et al. 201823 | Conference abstract with insufficient detail |
| Azzabi et al. 201724 | Conference abstract with insufficient detail |
| Baji et al. 201625 | Conference abstract with insufficient detail |
| Beilman et al. 201726 | Conference abstract with insufficient detail |
| Beilman et al. 201727 | Conference abstract with insufficient detail |
| Di Sabatino et al. 201128 | Conference abstract published before the specified cut-off date (2016) |
| Ghosh et al. 201529 | Not a full economic evaluation |
| Hansson-Hedblom et al. 201730 | Conference abstract with insufficient detail |
| Jean et al. 201831 | Not a full economic evaluation (systematic review of existing evidence) |
| Jewell et al. 200532 | Not available |
| Koelewijn et al. 200633 | Not a full economic evaluation (systematic review of existing evidence) |
| Lee et al. 201234 | Conference abstract with insufficient detail |
| Lindsay et al. 201335 | Not a full economic evaluation |
| Marchetti et al. 201436 | Not available |
| Marshall et al. 200237 | Not a full economic evaluation |
| Marshall 200238 | Not a full economic evaluation (subjective review of existing evidence) |
| Mlcoch et al. 201839 | Conference abstract with insufficient detail |
| Mobinizadeh et al. 201240 | Non-English language |
| Noble et al. 199841 | Outdated clinical practice  |
| Ntr 200542 | Study protocol |
| Ob et al. 201843 | Conference abstract with insufficient detail |
| Panaccione et al. 201744 | Conference abstract with insufficient detail |
| Panaccione et al. 201845 | Conference abstract with insufficient detail |
| Pillai et al. 201746 | Not a full economic evaluation (systematic review of existing evidence) |
| Priest et al. 200647 | Irrelevant population (IBD not limited to Crohn's disease) |
| Rencz et al. 201748 | Not available |
| Robson et al. 201849 | Conference abstract with insufficient detail |
| Rosim et al. 201750 | Conference abstract with insufficient detail |
| Rudakova 201251 | Non-English language  |
| Saro et al. 201552 | Methods and results unable to inform conceptual model |
| Schneider et al. 201753 | Conference abstract with insufficient detail |
| Schneider et al. 201754 | Conference abstract with insufficient detail |
| Schneider et al. 201655 | Conference abstract with insufficient detail |
| Scott et al. 201756 | Conference abstract with insufficient detail |
| Scott et al. 201357 | Not a full economic evaluation |
| Shah et al. 201658 | Conference abstract with insufficient detail |
| Siegel et al. 200659 | Not a full economic evaluation |
| Sprakes et al. 201060 | Not a full economic evaluation |
| Steenholdt et al. 201461 | Methods and results unable to inform conceptual model |
| Swaminath et al. 201362 | Not a full economic evaluationIrrelevant comparison and outcomes related to tuberculosis screening |
| Tang et al. 201363 | Not a full economic evaluation (systematic review of existing evidence) |
| Trallori et al. 199764 | Outdated clinical practice  |
| Tsui et al. 201865 | Not a full economic evaluation |
| Wilson and Lucas 201866 | Conference abstract with insufficient detail |
| Winter et al. 200467 | Population unclear (types of IBD not reported)Irrelevant comparison and outcomes related to genotype screening |
| Zaboli et al. 201768 | Conference abstract with insufficient detail |

## Economic evaluations of tests for the identification of those at high risk of developing a severe course of Crohn’s disease

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| Study | Reason for exclusion |
| Odes et al. 200769 | Not a full economic evaluation |
| Teml et al. 200370 | Not available |
| Spizzo et al. 201771 | Conference abstract with insufficient detail |

## Health-related quality of life (HRQoL) evidence

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| Study  | Reason for exclusion |
| Araki et al 200972 | Not available |
| Barreiro-de Acosta et al 201273 | Conference abstract with insufficient detail |
| Bastida et al 201174 | Conference abstract with insufficient detail |
| Baumgart et al 201575 | Conference abstract with insufficient detail |
| Bernklev et al 200676 | Utility data not relevant to model health states |
| Bernklev et al 200277 | Subgroup data irrelevant  |
| Blondel-Kucharski et al 200178 | Utility data not relevant to model health states |
| Bokemeyer et al 201479 | Conference abstract with insufficient detail |
| Bokemeyer et al 201480 | Conference abstract with insufficient detail |
| Bokemeyer et al 201981 | Conference abstract with insufficient detail |
| Bracher et al 201982 | Conference abstract with insufficient detail |
| Buxton et al 200783 | Not primary source of data |
| Cappello et al 201284 | Conference abstract with insufficient detail |
| Cappello et al 201285 | Conference abstract with insufficient detail |
| Cappello et al 201386 | Conference abstract with insufficient detail |
| Casellas et al 201287 | Not available |
| Casellas et al 201788, 89 | Conference abstract with insufficient detail. Duplicate |
| Casellas et al 200390 | Not available |
| Casellas et al 201291 | Conference abstract with insufficient detail |
| Ceballos et al 201392 | Conference abstract with insufficient detail |
| Chiarini et al 201793 | Non-English Language |
| Chrobak-Bien et al 201794 | Non-English Language  |
| Cicchetti et al 201395 | Conference abstract with insufficient detail |
| Cohen et al 201496 | Subgroup data irrelevant |
| Colombel et al 200997 | Not available  |
| Colombel et al 201398,99 | Insufficient detail from the abstract. Duplicate |
| Coteur et al 2009100 | Utility data not relevant to model health states  |
| Danese et al 2019101 | Conference abstract with insufficient detail |
| Friger et al 2014102 | Conference abstract with insufficient detail |
| Fritzell et al 2018103 | Conference abstract with insufficient detail |
| Geccherle et al 2015104 | Conference abstract with insufficient detail |
| Geccherle et al 2013105 | Conference abstract with insufficient detail |
| Ghazi et al 2010106 | Conference abstract with insufficient detail |
| Ghosh et al 2019107 | Subgroup data irrelevant |
| Ghosh et al 2013108,109 | Conference abstract with insufficient detail. Duplicate |
| Gratzer et al 2013110 | Conference abstract with insufficient detail |
| Greenberg et al 2015111 | Conference abstract with insufficient detail |
| Grochenig et al 2017112 | Not available |
| Hashimoto et al 1999113 | Non-English language |
| Hibi et al 2010114 | Conference abstract with insufficient detail |
| Hotokezaka et al 2010115 | Conference abstract with insufficient detail |
| Huang et al 2015116 | Not available |
| Hummel et al 2011117 | Not available |
| Huppertz-Hauss et al 2015118 | Conference abstract with insufficient detail |
| Huppertz-Hauss et al 2016119 | Conference abstract with insufficient detail |
| Iglesias et al 2009120 | Conference abstract with insufficient detail |
| Kane et al 2012121 | Conference abstract with insufficient detail |
| Kiran et al 2011122 | No utility data available for different health states |
| Kniazev et al 2011123 | Non-English language |
| Knowles et al 2018124 | No utility data available for different health states |
| Larsson et al 2008125 | No subgroup utility data for CD patients |
| Lazzaro et al 2014126 | Conference abstract with insufficient detail |
| Liu et al 2018127  | No subgroup utility data for CD patients |
| Loftus et al 2009128 | Conference abstract with insufficient detail |
| Longworth et al 2018129 | Conference abstract with insufficient detail |
| Manuela et al 2013130 | Not available |
| Mnif et al 2010131 | No subgroup utility data for CD patients |
| Mostafa et al 2017132 | Not available.  |
| Munoz et al 2013133 | Conference abstract with insufficient detail |
| Novacek et al 2011134 | Conference abstract with insufficient detail |
| Ormerod et al 2012135,136 | Conference abstract with insufficient detail. Duplicate |
| Panaccione et al 2018137 | Conference abstract with insufficient detail |
| Panaccione et al 2009138  | Conference abstract with insufficient detail |
| Petryszyn et al 2016139 | Conference abstract with insufficient detail |
| Petryszyn et al 2015140 | Conference abstract with insufficient detail |
| Reinshagen et al 2013141 | Conference abstract with insufficient detail |
| Rencz et al 2018142 | Conference abstract with insufficient detail |
| Romberg-Camps et al 2010143 | Not available |
| Sandborn et al 2011144 | Conference abstract with insufficient detail |
| Sandborn et al 2012145 | Conference abstract with insufficient detail |
| Sandborn et al 2015146,147 | Conference abstract with insufficient detail. Duplicate |
| Sands et al 2016148 | Conference abstract with insufficient detail |
| Schwartz et al 2015149 | Conference abstract with insufficient detail |
| Schwartz et al 2016150  | Conference abstract with insufficient detail |
| Sherman et al 2014151 | No subgroup utility data for CD patients |
| Stjernman et al 2006152 | Not available |
| Szepes et al 2012153 | Conference abstract with insufficient detail |
| Taxonera et al 2016154,155 | Conference abstract with insufficient detail. Duplicate |
| Timmer et al 2009156 | Utility values not relevant for the model |
| Toruner et al 2017157 | Conference abstract with insufficient detail |
| Toya et al 2015158 | Conference abstract with insufficient detail |
| Vardi et al 2015159 | Conference abstract with insufficient detail |
| Vermeire et al 2017160,161 | Conference abstract with insufficient detail. Duplicate  |
| Wang et al 2016162 | Conference abstract with insufficient detail |
| Wang et al 2013163 | Not available |
| Worbes-Cerezo et al 2017164 | Conference abstract with insufficient detail |
| Wright et al 2014165,166 | Conference abstract with insufficient detail. Duplicate |
| Xu et al 2014167 | Utility data not relevant to model health states  |
| Yarlas A et al 2016168,169 | Conference abstract with insufficient detail. Duplicate |
| Yazdanpanah et al 1997170  | Insufficient detail on utility values (presented graphically) |
| Zakharash et al 2007171 | Non-English language |

## References

1. Beaven SW, Abreu MT. Biomarkers in inflammatory bowel disease. *Curr Opin Gastroenterol* 2004; **20**: 318-27.

2. Dotan I, Fishman S, Dgani Y, Schwartz M, Karban A, Lerner A, et al. Antibodies against laminaribioside and chitobioside are novel serologic markers in Crohn's disease. *Gastroenterology* 2006; **131**: 366-78.

3. Dotan I, Meringer H, Lerner A, Naftali T, Yaron A, Reif S, et al. Anti-glycan antibodies are significantly increased in Crohn's disease patients and their first degree relatives. *Gastroenterology* 2010; **138**: S524.

4. Fengming Y, Jianbing W. Biomarkers of inflammatory bowel disease. *Dis Markers* 2014; **2014**: 710915.

5. Gasparetto M, Nayak K, Lee C, Kraiczy J, Payne F, Torrente F, et al. Investigating CD8+ T-cell gene expression signatures as potential prognostic biomarkers in paediatric inflammatory bowel disease. *J Ped Gastroenterol Nutrition* 2018; **66**: 61-2.

6. Halder SL, Stempak JM, Sharaf A, Xu W, Greenberg GR, Steinhart H, et al. Biomarkers associated with progressive behaviour in Crohn's disease. *Gastroenterology* 2010; **138**: S37-S8.

7. Koutroubakis IE, Drygiannakis D, Tsirogianni A, Oustamanolakis P, Karmiris K, Papamichael K, et al. Antiglycan antibodies in Greek patients with inflammatory bowel disease. *Dig Dis Sci* 2011; **56**: 845-52.

8. Lee JC, Lyons P, Parkes M, Smith KG. A CD8 T cell gene expression signature predicts disease behaviour in inflammatory bowel disease. *Gut* 2011; **60**: A61.

9. Lee JC, Lyons P, McKinney E, Carr E, Rayner T, Parkes M, et al. Gene expression profiling in CD8 T cells predicts disease course in Crohn's disease and ulcerative colitis. *J Crohn's Colitis* 2011; **5**: S3-S4.

10. Lee JC, Lyons PA, McKinney EF, Sowerby JM, Carr EJ, Bredin F, et al. Gene expression profiling of CD8+ T cells predicts prognosis in patients with Crohn disease and ulcerative colitis. *J Clin Invest* 2011; **121**: 4170-9.

11. Lee JC. Predicting the course of IBD: light at the end of the tunnel? *Dig Dis* 2012; **30 Suppl 1**: 95-9.

12. Lee J, Biasci D, Noor N, McKinney E, Ahmad T, Lewis N, et al. PROFILE trial: Predicting outcomes for Crohn's disease using a molecular biomarker. *Journal of Crohn's and Colitis* 2017; **11**: S55.

13. Lee JC, Biasci D, Noor NM, McKinney EF, Ahmad T, Lewis NR, et al. Profile trial: Predicting outcomes for Crohn's disease using a molecular biomarker. *United European Gastroenterology Journal* 2017; **5**: A98.

14. Lee JC, Biasci D, Noor NM, McKinney EF, Ahmad T, Lewis NR, et al. Profile trial: Predicting outcomes for Crohn's disease using a molecular biomarker. *Gut* 2017; **66**: A22-A3.

15. Lyons PA. A blood-based prognostic biomarker in inflammatory bowel disease; towards personalised medicine in IBD. *Gastroenterology* 2019; **156**: S20.

16. Papp M, Lakatos PL. Serological studies in inflammatory bowel disease: how important are they? *Curr Opin Gastroenterol* 2014; **30**: 359-64.

17. Rieder F, Schleder S, Wolf A, Schirbel A, Dirmeier A, Obermeier F, et al. Level changes of serum anti-glycan antibodies in individual Crohn's disease patients over time. *J Crohn's Colitis* 2011; **5**: S45.

18. Rieder F, Franke A, Lopez R, Huebenthal M, Dirmeier A, Wang MH, et al. Genetic risk profiling alone or in combination with serum anti-microbial antibodies for the stratification of complicated crohn's disease courses. *Gastroenterology* 2013; **144**: S469.

19. Ryan JD, Silverberg MS, Xu W, Graff LA, Targownik LE, Walker JR, et al. Predicting complicated Crohn's disease and surgery: Phenotypes, genetics, serology and psychological characteristics of a population-based cohort. *Alimentary Pharmacol Therapeutics* 2013; **38**: 274-83.

20. Simondi D, Mengozzi G, Betteto S, Bonardi R, Ghignone RP, Fagoonee S, et al. Antiglycan antibodies as serological markers in the differential diagnosis of inflammatory bowel disease. *Inflamm Bowel Dis* 2008; **14**: 645-51.

21. Aliyev ER, Hay JW, Hwang C. The cost-effectiveness of ustekinumab compared to infliximab and adalimumab in adult patients with moderate-severe Crohn's disease (TNF naive population). *Value in Health* 2018; **21**: S84.

22. Ananthakrishnan AN, Korzenik JR, Hur C. Can mucosal healing be a cost-effective endpoint for biologic therapy in Crohn's disease? A decision analysis. *Inflammatory Bowel Diseases* 2013; **19**: 37-44.

23. Arhan M, Tezel HA, Toruner M, Bilaloglu B, Koral S, Ozer E. COST-EFFECTIVENESS ANALYSIS OF USTEKINUMAB VERSUS ADALIMUMAB, INFLIXIMAB AND VEDOLIZUMAB FOR THE TREATMENT OF PATIENTS WITH MODERATELY TO SEVERE ACTIVE CROHN'S DISEASE FOR TURKEY. *Value in Health* 2018; **21**: S145.

24. Azzabi Zouraq I, Wilson M, Hather G, Curtis R, Luo M, Khalid JM, et al. Cost-effectiveness of vedolizumab compared with ustekinumab as treatment for patients with moderately to severely active crohn's disease in The United States. *Value in Health* 2017; **20**: A183.

25. Baji P, Pentek M, Brodszky V, Gulacsi L, Rencz F, Golovics PA, et al. Cost-utility of biosimilar infliximab for the treatment of fistulising crohn's disease in nine european countries. *United European Gastroenterology Journal* 2016; **4**: A631.

26. Beilman CL, Kirwin E, Ma C, McCabe C, Fedorak RN, Halloran BP. Early initiation of anti-TNF therapy is cost-saving compared to late initiation for patients with Crohn's disease. *Gastroenterology* 2017; **152**: S137.

27. Beilman CL, Ma C, McCabe C, Fedorak RN, Halloran BP. Cost-effectiveness of infliximab's biosimilar CT-P13 compared to innovator infliximab for the management of Crohn's disease. *Gastroenterology* 2017; **152**: S447.

28. Di Sabatino A, Marchetti M, Liberato L, Biancheri P, Guerci M, Corazza GR. Cost-effectiveness of top-down versus step-up strategies in patients with newly diagnosed active luminal Crohn's disease (CD). *Journal of Crohn's and Colitis* 2011; **5**: S143-S4.

29. Ghosh N, Premch, P. A UK cost of care model for inflammatory bowel disease. *Frontline Gastroenterology* 2015; **6**: 169-74.

30. Hansson-Hedblom A, Almond C, Borgstrom F, Sly I, Enkusson D, Troelsgaard Buchholt A, et al. The cost-effectiveness of ustekinumab in moderate to severely active crohn's disease in Sweden. *Value in Health* 2017; **20**: A634.

31. Jean L, Audrey M, Beauchemin C, Consortium OBOTi. Economic Evaluations of Treatments for Inflammatory Bowel Diseases: A Literature Review. *Canadian journal of gastroenterology & hepatology* 2018; **2018**: 7439730.

32. Jewell DP, Satsangi J, Lobo A, Probert C, Forbes A, Ghosh S, et al. Infliximab use in Crohn's disease: Impact on health care resources in the UK. *European Journal of Gastroenterology and Hepatology* 2005; **17**: 1047-52.

33. Koelewijn C, Schrijvers A, Oldenburg B. Infliximab use in patients with Crohn's disease: Quality of life, costs and resource use. *Netherlands Journal of Medicine* 2006; **64**: 212-8.

34. Lee D, Gladwell D, Batty A, Berry P, Smith HT. A treatment sequence approach for modelling Crohn's disease. *Value in Health* 2012; **15**: A474.

35. Lindsay JO, Chipperfield R, Giles A, Wheeler C, Orchard T. A UK retrospective observational study of clinical outcomes and healthcare resource utilisation of infliximab treatment in Crohn's disease. *Alimentary Pharmacology and Therapeutics* 2013; **38**: 52-61.

36. Marchetti M, Liberato NL. Biological therapies in Crohn's disease: Are they cost-effective? A critical appraisal of model-based analyses. *Expert Review of Pharmacoeconomics and Outcomes Research* 2014; **14**: 815-24.

37. Marshall J, Blackhouse G, Goeree R, Brazier N, Irvine E, Faulkner L, et al. *Infliximab for the treatment of Crohn's disease: a systematic review and cost-utility analysis*. Ottawa: Canadian Coordinating Office for Health Technology Assessment (CCOHTA); 2002.

38. Marshall JK. Funding the new biologics - CCOHTA report on the cost effectiveness of infliximab for Crohn's disease: Pearls and pitfalls. *Canadian Journal of Gastroenterology* 2002; **16**: 877-9.

39. Mlcoch T, Hajickova B, Ornstova E, Chadimova K, Bartakova J, Dolezal T. COST-EFFECTIVENESS ANALYSIS OF PARENTERAL METHOTREXATE FOR THE TREATMENT OF CROHN'S DISEASE IN THE CZECH REPUBLIC. *Value in Health* 2018; **21**: S145.

40. Mobinizadeh M, Oliyaeemanesh A, Doaee S, Nejati M, Aboee P, Azadbakht M, et al. Health technology assessment of infliximab: A rapid review of type 2 studies. *Journal of Isfahan Medical School* 2012; **30**.

41. Noble I, Brown R, Danielsson A, Ericsson K, Floren CH, Hertzman P, et al. Cost-effectiveness of budesonide controlled ileal release (CIR) capsules as maintenance therapy versus no maintenance therapy for ileocaecal Crohn's disease in Sweden. *Clinical Drug Investigation* 1998; **15**: 123-36.

42. Ntr. The Ideal Management of Crohn’s Disease: top Down Versus Step Up Strategies. A Prospective Controlled Trial in the Benelux. [*Http://wwwwhoint/trialsearch/trial2aspx?*](http://wwwwhoint/trialsearch/trial2aspx) *Trialid=ntr379* 2005.

43. Ob, o C, Naessens D, Ding Z, Muser E. Cost per responder analysis of ustekinumab versus adalimumab for treatment of moderately to severely active crohn's disease among patients who failed conventional therapy. *Journal of Managed Care and Specialty Pharmacy* 2018; **24**: S74.

44. Panaccione R, Colombel J, Bossuyt P, Lukas M, Baert F, Vanasek T, et al. Treat to target for crohn's disease with adalimumab treatment is cost effective over 48 weeks: An economic assessment of the calm trial. *United European Gastroenterology Journal* 2017; **5**: A8-A9.

45. Panaccione R, Colombel JF, Bossuyt P, Baert F, Vanasek T, Danalioglu A, et al. Long-term cost-effectiveness of tight control for Crohn's disease with adalimumab-based treatment: Economic evaluation beyond 48 weeks of CALM trial. *Journal of Crohn's and Colitis* 2018; **12**: S74-S5.

46. Pillai N, Dusheiko M, Burn, B, Pittet V. A systematic review of cost-effectiveness studies comparing conventional, biological and surgical interventions for inflammatory bowel disease. *PLoS ONE* 2017; **12**: e0185500.

47. Priest VL, Begg EJ, Gardiner SJ, Frampton CMA, Gearry RB, Barclay ML, et al. Pharmacoeconomic analyses of azathioprine, methotrexate and prospective pharmacogenetic testing for the management of inflammatory bowel disease. *PharmacoEconomics* 2006; **24**: 767-81.

48. Rencz F, Gulacsi L, Pentek M, Gecse KB, Dignass A, Halfvarson J, et al. Cost-utility of biological treatment sequences for luminal Crohn's disease in Europe. *Expert Review of Pharmacoeconomics and Outcomes Research* 2017; **17**: 597-606.

49. Robson RE, Vanoli A, Tolley K. COST-EFFECTIVENESS OF VEDOLIZUMAB COMPARED WITH CONVENTIONAL THERAPY IN PATIENTS WITH CROHN'S DISEASE IN THE UNITED KINGDOM (UK). *Value in Health* 2018; **21**: S455-S6.

50. Rosim RP, Duva AS, Ballalai Ferraz AF, Valle A, Toth E, Ferguson S, et al. Cost-minimization and budget impact analysis of certolizumab pegol for the treatment of crohn's disease from the perspective of the Brazilian private healthcare setting. *Value in Health* 2017; **20**: A181-A2.

51. Rudakova AV. [Cost-effectiveness of tumor necrosis factor in Crohn's disease]. *Eksperimental'nai{combining double inverted breve}a i klinicheskai{combining double inverted breve}a gastroenterologii{combining double inverted breve}a = Experimental & clinical gastroenterology* 2012: 83-6.

52. Saro C, Ceballos D, Munoz F, De La Coba C, Aguilar MD, Lazaro P, et al. Resources utilization and costs the year before and after starting treatment with adalimumab in Crohn's disease patients. *Inflammatory Bowel Diseases* 2015; **21**: 1631-40.

53. Schneider Y, Cohen-Mekelburg SA, Saumoy M, Gold S, Scherl E, Steinlauf AF. A cost-effectiveness analysis of post-operative prevention strategies for patients with Crohn's disease utilizing a markov model with varying time horizons. *Gastroenterology* 2017; **152**: S588.

54. Schneider Y, Saumoy M, Cohen-Mekelburg SA, Gold S, Scherl E, Steinlauf AF. A markov model evaluating the cost-effectiveness of ustekinumab compared to vedolizumab for patient's with Crohn's disease as third-line therapy. *Gastroenterology* 2017; **152**: S589.

55. Schneider Y, Saumoy M, Gold SL, Cohen-Mekelburg S, Bosworth B, Scherl EJ, et al. Cost-effectiveness of vedolizumab compared to adalimumab for patients with crohn's disease after loss of response to infliximab: A markov model. *American Journal of Gastroenterology* 2016; **111**: S335-S6.

56. Scott FI, Johnson FR, Bewtra M, Brensinger CM, Roy JA, Reed S, et al. Improved quality of life with anti-TNF therapy compared to continued corticosteroid utilization in Crohn's disease. *Gastroenterology* 2017; **152**: S585-S6.

57. Scott FI, Osterman MT, McConnell RA, Lorusso M, Aberra F, Kerner C, et al. Impact of JC virus antibody testing in patients with Crohn's disease with loss of response to infliximab: A Markov model. *Inflammatory Bowel Diseases* 2013; **19**: 2625-33.

58. Shah Y, Vajravelu RK, Bewtra M, Mamtani R, Lewis J, Scott FI. The impact of gender on age-specific risks and benefits of combination therapy with infliximab and azathioprine versus infliximab alone: A Markov model. *Gastroenterology* 2016; **150**: S972-S3.

59. Siegel CA, Hur C, Korzenik JR, Gazelle GS, s BE. Risks and benefits of infliximab for the treatment of Crohn's disease. *Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association* 2006; **4**: 1017-976.

60. Sprakes MB, Ford AC, Suares NC, Warren L, Greer D, Donnellan CF, et al. Costs of care for Crohns disease following the introduction of infliximab: A single-centre UK experience. *Alimentary Pharmacology and Therapeutics* 2010; **32**: 1357-63.

61. Steenholdt C, Brynskov J, Thomsen O, Munck LK, Fallingborg J, Christensen LA, et al. Individualised therapy is more cost-effective than dose intensification in patients with Crohn's disease who lose response to anti-TNF treatment: a randomised, controlled trial. *Gut* 2014; **63**: 919‐27.

62. Swaminath A, Bhadelia N, Wang YC. Cost-effectiveness of quantiferon testing before initiation of biological therapy in inflammatory bowel disease. *Inflammatory Bowel Diseases* 2013; **19**: 2444-9.

63. Tang DH, Harrington AR, Lee JK, Lin M, Armstrong EP. A systematic review of economic studies on biological agents used to treat Crohn's disease. *Inflammatory Bowel Diseases* 2013; **19**: 2673-94.

64. Trallori G, Messori A. Drug treatments for maintaining remission in Crohn's disease: A lifetime cost-utility analysis. *PharmacoEconomics* 1997; **11**: 444-53.

65. Tsui JJ, Huynh HQ. Is top-down therapy a more effective alternative to conventional step-up therapy for crohn's disease? *Annals of Gastroenterology* 2018; **31**: 413-24.

66. Wilson M, Lucas A. COST-EFFECTIVENESS OF VEDOLIZUMAB VERSUS USTEKINUMAB IN UNITED KINGDOM CROHN'S DISEASE PATIENTS WHO PREVIOUSLY FAILED TNF INHIBITOR THERAPY. *Value in Health* 2018; **21**: S145.

67. Winter J, Walker A, Shapiro D, Gaffney D, Spooner RJ, Mills PR. Cost-effectiveness of thiopurine methyltransferase genotype screening in patients about to commence azathioprine therapy for treatment of inflammatory bowel disease. *Alimentary Pharmacology and Therapeutics* 2004; **20**: 593-9.

68. Zaboli P, Nikfar S, Kebriaeezadeh A, Malekzadeh R, Akbari Sari A, Sima A, et al. Cost utility analysis of infliixmab and adalimumab compared with conventional therapy in patients with crohn disease in the islamic Republic of Iran. *Value in Health* 2017; **20**: A636.

69. Odes S, Friger M, Vardi H, Claessens G, Bossuyt X, Riis L, et al. Role of ASCA and the NOD2/CARD15 mutation Gly908Arg in predicting increased surgical costs in Crohn's disease patients: A project of the European collaborative study group on inflammatory bowel disease. *Inflammatory Bowel Diseases* 2007; **13**: 874-81.

70. Teml A, Kratzer V, Schneider B, Lochs H, Norman GL, Gangl A, et al. Anti-Saccharomyces cerevisiae antibodies: a stable marker for Crohn's disease during steroid and 5-aminosalicylic acid treatment. *American journal of gastroenterology* 2003; **98**: 2226‐31.

71. Spizzo P, Sawers M, Hair C, Bell S. Predicting complicated disease, surgery, disability, and high cost of care in inflammatory bowel disease. *Journal of Gastroenterology and Hepatology (Australia)* 2017; **32**: 147.

72. Araki Y, Noake T, Nakagawa M, Iwatani Y, Ozasa H, Naveyama K, et al. Deliberate Infliximab therapy after surgery for Crohn's disease. *Colorectal Disease* 2009; **11**: 4.

73. Barreiro-de Acosta M, Iglesias M, Caamano F, Lorenzo Gonzalez A, Domingez-Munoz JE. Is quality of life worse in operated Crohn's disease patients? *Journal of Crohn's and Colitis* 2012; **6**: S49.

74. Bastida G, Aguas M, Beltran B, Iborra M, Moret I, Rausell F, et al. Quality of life in Crohn's disease patients with endoscopic recurrence after surgery: Influence of thiopurine treatment. *Journal of Crohn's and Colitis* 2011; **5**: S137.

75. Baumgart DC, Atreya R, Bachmann O, Blaker M, Bokemeyer B, Borner N, et al. Vedolizumab for inflammatory bowel disease in clinical practice-experience from a prospective German registry. *United European Gastroenterology Journal* 2015; **3**: A18.

76. Bernklev T, Jahnsen J, Henriksen M, Lygren I, Aadl, E, et al. Relationship between sick leave, unemployment, disability, and health-related quality of life in patients with inflammatory bowel disease. *Inflammatory Bowel Diseases* 2006; **12**: 402-12.

77. Bernklev T, Moum B, Moum T, Inflammatory Bowel South-Eastern Norway Group of G. Quality of life in patients with inflammatory bowel disease: translation, data quality, scaling assumptions, validity, reliability and sensitivity to change of the Norwegian version of IBDQ. *Scandinavian journal of gastroenterology* 2002; **37**: 1164-74.

78. Blondel-Kucharski F, Chircop C, Marquis P, Cortot A, Baron F, Gendre JP, et al. Health-related quality of life in Crohn's disease: a prospective longitudinal study in 231 patients. *The American journal of gastroenterology* 2001; **96**: 2915-20.

79. Bokemeyer B, Helwig U, Teich N, Schmidt C, Krummenerl T, Rupf AK, et al. Adalimumab and infliximab as induction therapy for crohn's disease-a prospective observational study in Germany. *Gastroenterology* 2014; **146**: S-453.

80. Bokemeyer B, Helwig U, Teich N, Schmidt C, Krummenerl T, Rupf AK, et al. TNF-alpha as induction therapy for Crohn's disease: A comparison of adalimumab and infliximab a prospective observational study in Germany. *Journal of Crohn's and Colitis* 2014; **8**: S205.

81. Bokemeyer B, Plachta-Danielzik S, Teich N, Mohl W, Hoffstadt M, Schweitzer A, et al. Effectiveness and quality of life (QoL) of Ustekinumab (UST) therapy in a real-world setting in Germany-first results of the RUNCD study. *Journal of Crohn's and Colitis* 2019; **13**: S486.

82. Bracher M, Gorsh B, Symons JM, Chauhan D, Hoskin B, Lucas J, et al. Burden of disease in patients with Crohn's disease: Retrospective analysis of cross-sectional survey data from the USA and Germany. *Journal of Crohn's and Colitis* 2019; **13**: S525-S6.

83. Buxton MJ, Lacey LA, Feagan BG, Niecko T, Miller DW, Townsend RJ. Mapping from disease-specific measures to utility: An analysis of the relationships between the inflammatory bowel disease questionnaire and Crohn's disease activity index in Crohn's disease and measures of utility. *Value in Health* 2007; **10**: 214-20.

84. Cappello M, Nastri L, Bravata I, Massihnia E, Rumeo MV, La Barbera D, et al. Personality traits, defense mechanisms and perception of quality of life (QOL) in patients with inflammatory bowel disease (IBD) and matched controls. *Gastroenterology* 2012; **142**: S802.

85. Cappello M, Nastri L, Bravata I, Bonanno B, Frenda M, Massihnia E, et al. Personality profile, defense mechanisms and perception of quality of life (QOL) in patients with inflammatory bowel disease (IBD): Usefulness of an integrated approach. *Digestive and Liver Disease* 2012; **44**: S195.

86. Cappello M, Nastri L, Bravata I, Massihnia E, Rumeo MV, La Barbera D, et al. Personality factors and perception of quality of life (HRQOL) in patients with inflammatory bowel disease (IBD) and matched controls. *Digestive and Liver Disease* 2013; **45**: S145-S6.

87. Casellas F, Barreiro De Acosta M, Iglesias M, Robles V, Nos P, Aguas M, et al. Mucosal healing restores normal health and quality of life in patients with inflammatory bowel disease. *European Journal of Gastroenterology and Hepatology* 2012; **24**: 762-9.

88. Casellas F, Barreiro-De Acosta M, Esteve M, Castro-Laria L, Vicente R, Ceballos D, et al. Early improvement in quality of life in patients with luminal Crohn's disease treated with adalimumab. Data from RAPIDA trial. *Journal of Crohn's and Colitis* 2017; **11**: S291-S2.

89. Casellas F, Barreiro-De Acosta M, Esteve M, Castro-Laria L, Vicente R, Ceballos D, et al. Early improvement in quality of life in patients with luminal Crohn's disease treated with adalimumab. Data from rapida trial. *United European Gastroenterology Journal* 2017; **5**: A530.

90. Casellas F, Lopez Vivancos J, Malagelada JR. Previous experience and quality of life in patients with inflammatory bowel disease during relapse. *Revista Espanola de Enfermedades Digestivas* 2003; **95**: 476-9.

91. Casellas Jorda F, Barreiro-de Acosta M, Iglesias M, Robles V, Nos P, Aguas M, et al. Restoration of health in patients with inflammatory bowel disease and mucosal healing. *Journal of Crohn's and Colitis* 2012; **6**: S46.

92. Ceballos D, Munoz F, Saro C, De La Coba C, Aguilar MD, Lazaro P. Clinical response and quality of life in patients with Crohn's disease treated with adalimumab in routine clinical practice. *Journal of Crohn's and Colitis* 2013; **7**: S236.

93. Chiarini M, Di Simone E, Scafuro C, Auddino F, Fabbri M, Delli Poggi A, et al. Health self-perception in patient with Crohn's disease: A web survey. *Clin Ter* 2017; **168**: e401-e5.

94. Chrobak-Bien J, Gawor A, Paplaczyk M, Malecka-Panas E, Gasiorowska A. Analysis of factors affecting the quality of life of those suffering from Crohn's disease. *Pol Przegl Chir* 2017; **89**: 16-22.

95. Cicchetti A, Gasbarrini A, Ruggeri M. Crohn's disease: An economic assessment of biological drugs in Italy. *Value in Health* 2013; **16**: A497-A8.

96. Cohen BL, Zoega H, Shah SA, Leleiko N, Lidofsky S, Bright R, et al. Fatigue is highly associated with poor health-related quality of life, disability and depression in newly-diagnosed patients with inflammatory bowel disease, independent of disease activity. *Alimentary Pharmacology and Therapeutics* 2014; **39**: 811-22.

97. Colombel E, Colombel J, Pollack P, Majethia S, Chen N. Adalimumab treatment associated with rapid and significant improvements in health-related quality of life in patients with crohn's disease. *Canadian Journal of Gastroenterology* 2009; **23**.

98. Colombel JF, Panaccione R, Louis E, Yang M, Skup M, Pollack PF, et al. Quality of life for patients with deep remission vs. clinical remission and deep remission vs. absence of mucosal ulceration: 3-year data from CHARM/ADHERE. *Journal of Crohn's and Colitis* 2013; **7**: S74.

99. Colombel JF, Panaccione R, Louis E, Skup M, Yang M, Pollack PF, et al. Quality of life for patients with deep remission vs. Clinical remission and deep remission vs. Absence of mucosal ulceration: 3-year data from charm/adhere. *Gastroenterology* 2013; **144**: S629.

100. Coteur G, Feagan B, Keininger DL, Kosinski M. Evaluation of the meaningfulness of health-related quality of life improvements as assessed by the SF-36 and the EQ-5D VAS in patients with active Crohn's disease. *Alimentary Pharmacology and Therapeutics* 2009; **29**: 1032-41.

101. Danese S, Adsul S, Lindner D, Jones S, Patel H, Colombel JF. Effects of IV vedolizumab on health-related quality of life and work productivity in patients with Crohn's disease: Results from the Phase 3b VERSIFY trial. *Journal of Crohn's and Colitis* 2019; **13**: S293-S4.

102. Friger M, Sarid O, Slonim-Nevo V, Vardi H, Greenberg D, Ben Yaakov G, et al. Associations between crohn's disease severity and specific socio-demographic, quality-of-life and coping factors. *Value in Health* 2014; **17**: A363.

103. Fritzell K, Bjork J, Storlahls A, Hedin C. Differences in self-reported impact on healthrelated quality of life and symptoms in patients with Crohn's disease and ulcerative colitis. *Journal of Crohn's and Colitis* 2018; **12**: S569-S70.

104. Geccherle E, Fortuna M, Montanari R, Geccherle A. Quality of life and coping mechanisms in patients with Crohn's disease treated with biological therapy. *Journal of Crohn's and Colitis* 2015; **9**: S100.

105. Geccherle E, Fortuna M, Montanari R, Geccherle A, Chiaramonte M. Quality of life and coping mechanisms in patients with crohn's disease treated with biological therapy. *Digestive and Liver Disease* 2013; **45**: S147.

106. Ghazi L, Patil S, Flasar M, Cross R. Is the natural history of crohn's disease altered by immune suppressant or biologic drug use? *American Journal of Gastroenterology* 2010; **105**: S467-S8.

107. Ghosh S, Bressler B, Petkau J, Thakkar RB, Wang S, Skup M, et al. Healthcare Providers Underestimate Patients' Glucocorticoid Use in Crohn's Disease. *Digestive Diseases and Sciences* 2019; **64**: 1142-9.

108. Ghosh S, Schreiber S, Petkau J, Bressler B, Thakkar RB, Yang M, et al. Evaluating clinical practice patterns with inflammatory bowel disease health care assessment questionnaires (POLARIS): A patient-and a physician-reported survey. *Journal of Crohn's and Colitis* 2013; **7**: S214.

109. Ghosh S, Schreiber S, Petkau J, Bressler B, Thakkar R, Skup M, et al. Evaluating clinical practice patterns with inflammatory bowel disease health care assessment questionnaires (polaris): A patient-and a physician-reported survey. *Gastroenterology* 2013; **144**: S430.

110. Gratzer C, Reinisch W, Vogelsang H, Dejaco C, Angelberger S, Eser A, et al. Health, marital and occupational state of patients with Crohn's disease relative to their non-IBD affected siblings and peers. *Journal of Crohn's and Colitis* 2013; **7**: S267.

111. Greenberg D, Vardi H, Schwartz D, Friger M, Sarid O, Slonim-Nevo V, et al. Predictors of health-related utility weights in a consecutive cohort of real-world crohn's disease patients in Israel. *Value in Health* 2015; **18**: A226.

112. Grochenig H, Tillinger W, Wurzer H, Ludwiczek O, Kramer L, Koch R, et al. Quality of life evaluation in patients with Crohn's disease under immunosuppressive and biologic therapy. *Zeitschrift fur Gastroenterologie* 2017; **55**.

113. Hashimoto H, Iwao Y, Hibi T, Ueno F, Miyahara T, Sugita A, et al. A model of quality of life in the patients with Crohn's disease. *Japanese Journal of Gastroenterology* 1999; **96**: 1258-65.

114. Hibi T, Watanabe M, Camez AA, Alam S, Chao J, Mulani P, et al. Japanese patients with moderately to severely active Crohn's disease experience improved quality of life with adalimumab treatment. *Gastroenterology* 2010; **138**: S321.

115. Hotokezaka M, Ikeda T, Uchiyama S, Chijiiwa K. Factors influencing quality of life after abdominal surgery for Crohn's disease. *Gastroenterology* 2010; **138**: S322.

116. Huang XL, Zhao JF, Zhao RF, Zhu LR. Exploring psychological aspects and quality of life in patients with IBD. *Journal of Digestive Diseases* 2015; **16**: 67.

117. Hummel T, Tak E, Stam H, Benninga M, Kindermann A, Grootenhuis M. The course of life and health-related quality of life of adolescents with inflammatory bowel disease. *Journal of Pediatric Gastroenterology and Nutrition* 2011; **52**: E150-E1.

118. Huppertz-Hauss G, Hoivik ML, Moum B, Hoff G, Bernklev T. Health-related quality of life in inflammatory bowel disease in South-East Norway 20 years after diagnosis. *United European Gastroenterology Journal* 2015; **3**: A417.

119. Huppertz-Hauss G, Lie Hoivik M, Jelsness-Jorgensen LP, Henriksen M, Hoie O, Jahnsen J, et al. Health-related Quality of Life in Patients with Inflammatory Bowel Disease 20 Years after Diagnosis: Results from the IBSEN Study. *Inflammatory Bowel Diseases* 2016; **22**: 1679-87.

120. Iglesias M, Barreiro M, Figueiras A, Vazquez I, Nieto L, Gomez R, et al. Influence of patient- and disease-related factors On quality of life (QOL) in patients with Crohn's disease (CD) in remission. *Gastroenterology* 2009; **136**: A356.

121. Kane S, Nag A, Taylor L, Hogge G, Colombel JF, Lewis J, et al. Touchv patient reported outcomes study: The impact of natalizumab on common measures of quality of life in cd patients. *Inflammatory Bowel Diseases* 2012; **18**: S41-S2.

122. Kiran RP, Nisar PJ, Church JM, Fazio VW. The role of primary surgical procedure in maintaining intestinal continuity for patients with Crohn's colitis. *Annals of surgery* 2011; **253**: 1130-5.

123. Kniazev OV, Boldyreva ON, Parfenov AI, Efremov LI, Guseinzade MG, Ruchkina IN, et al. [Quality of life in inflammatory bowel disease patients]. *Eksperimental'nai{combining double inverted breve}a i klinicheskai{combining double inverted breve}a gastroenterologii{combining double inverted breve}a = Experimental & clinical gastroenterology* 2011: 18-25.

124. Knowles SR, Keefer L, Wilding H, Hewitt C, Graff LA, Mikocka-Walus A. Quality of Life in Inflammatory Bowel Disease: A Systematic Review and Meta-analyses-Part II. *Inflammatory bowel diseases* 2018; **24**: 966-76.

125. Larsson K, Loof L, Ronnblom A, Nordin K. Quality of life for patients with exacerbation in inflammatory bowel disease and how they cope with disease activity. *Journal of psychosomatic research* 2008; **64**: 139-48.

126. Lazzaro C, Cappello M, Cortelezzi C, Costantino G, Fiorino G, Mastronardi M, et al. Health-related quality of life in Italian patients with moderate and severe crohn's disease: Interim results from the sole study. *Value in Health* 2014; **17**: A570-A1.

127. Liu R, Tang A, Wang X, Shen S. Assessment of Quality of Life in Chinese Patients with Inflammatory Bowel Disease and their Caregivers. *Inflammatory Bowel Diseases* 2018; **24**: 2039-47.

128. Loftus EV, Colombel JF, Rutgeerts P, Rubin DT, Chen N, Mulani P, et al. Quality-of-life improvements in patients with Crohn's disease treated for 3 years with adalimumab in an open-label extension of CHARM. *Gastroenterology* 2009; **136**: A179.

129. Longworth L, Singh J, Fountain D, Azzabi Zouraq I, Owen G, Lees M, et al. Do People With Crohn's Disease Value Health States Differently Based on Experience? *Value in Health* 2018; **21**: S43.

130. Manuela F, Eleonora G, Renzo M, Andrea G, Maria C. Quality of life and coping mechanisms in patients with Crohn's disease treated with biologics. *Journal of Gastroenterology and Hepatology* 2013; **28**: 796.

131. Mnif L, Mzid A, Amouri A, Chtourou L, Tahri N. Health - Related quality of life in patients with inflammatory bowel disease: A Tunisian study. *Tunisie Medicale* 2010; **88**: 933-6.

132. Mostafa S, Turner I. Quality of life assessment of patients with Crohn's disease in a single practice in South Western Sydney. *Journal of Gastroenterology and Hepatology (Australia)* 2017; **32**: 149.

133. Munoz F, Saro C, Ceballos D, De La Coba C, Aguilar MD, Lazaro P. Clinical response, quality of life and work activity in patients with crohn's disease treated with adalimumab in routine clinical practice. *United European Gastroenterology Journal* 2013; **1**: A217-A8.

134. Novacek G, Bauinger S, Miehsler W, Papay P, Primas C, Vavrovsky A, et al. Socio-economic impairment in patients with Crohn's disease as compared to their healthy siblings and friends. *Gastroenterology* 2011; **140**: S785.

135. Ormerod C, Shackcloth D, Harrison M, Brown E, Bodger K. The IBD-control questionnaire: Development and psychometric validation of a tool for capturing disease control from the patient perspective for use in routine care. *Gut* 2012; **61**: A173.

136. Ormerod C, Shackcloth D, Harrison M, Brown E, Bodger K. The IBD-control questionnaire: Development and psychometric validation of a tool for capturing disease control from the patient perspective for use in routine care. *Gastroenterology* 2012; **142**: S658.

137. Panaccione R, Colombel JF, Bossuyt P, Baert F, Vanasek T, Danalioglu A, et al. Tight control with adalimumab-based treatment is associated with improved quality of life outcomes in patients with moderate to severely active Crohn's disease: Data from CALM. *Journal of Crohn's and Colitis* 2018; **12**: S78-S9.

138. Panaccione R, Feagan BG, Hass S, Panjabi S. The impact of natalizumab on the quality of life of patients exposed to or failing anti-TNFalpha therapy in the ENCORE trial. *Gastroenterology* 2009; **136**: A180.

139. Petryszyn P, Piotrowski P, Ekk-Cierniakowski P, Staniak A, Well M. The valuation of the short inflammatory bowel disease questionnaire for use in economic evaluations. *Journal of Crohn's and Colitis* 2016; **10**: S163-S4.

140. Petryszyn P, Zachariasz A, Ekk-Cierniakowski P, Well M. Health-related quality of life in patients with inflammatory bowel disease in Poland (application of the EQ-5D and self-assessment of health state ). *Value in Health* 2015; **18**: A629.

141. Reinshagen M, Bokemeyer B, Krummenerl T, Mross MR, Nurwakagari P, Schwarz M, et al. Quality of life of Crohn's disease patients under immunosuppressive therapy in Germany preliminary results of the DaLi study. *Journal of Crohn's and Colitis* 2013; **7**: S169.

142. Rencz F, Brodszky V, Gulacsi L, Palatka K, Lakatos PL, Herszenyi L, et al. COMPARISON OF THE MEASUREMENT PROPERTIES OF THE EQ-5D-5L AND EQ-5D-3L IN PATIENTS WITH CROHN'S DISEASE. *Value in Health* 2018; **21**: S388.

143. Romberg-Camps MJL, Bol Y, Dagnelie PC, Hesselink-van de Kruijs MAM, Kester ADM, Engels LGJB, et al. Fatigue and health-related quality of life in inflammatory bowel disease: results from a population-based study in the Netherlands: the IBD-South Limburg cohort. *Inflammatory bowel diseases* 2010; **16**: 2137-47.

144. Sandborn W, Colombel J, Rutgeerts P, Yang M, Lomax K, Pollack P, et al. Achievement of early deep remission predicts better long-term outcomes for adalimumab-treated patients with Crohn's disease: Data from EXTEND. *Inflammatory Bowel Diseases* 2011; **17**: S60.

145. Sandborn W, Colombel JF, Louis E, Panaccione R, Yang M, Wu E, et al. Assessing preference for deep remission in patients with Crohn's disease. *Journal of Crohn's and Colitis* 2012; **6**: S123-S4.

146. Sandborn W, Colombel J-F, Panaccione R, Lasch K, Mody R, Green A, et al. Deep remission as a predictor of clinical outcomes in vedolizumab-treated patients with ulcerative colitis, 2015. Available from: <https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01130627/full>. Date accessed.

147. Sandborn W, Colombel J-F, Panaccione R, Lasch K, Mody R, Green A, et al. Deep remission as a predictor of clinical outcomes in vedolizumab-treated patients with ulcerative colitis, 2015. Available from: <https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01102675/full>. Date accessed.

148. Sands BE, Han C, Gasink C, Szapary P, Gao LL, Lang Y, et al. Ustekinumab improves general health status and disease-specific health related quality of life of patients with moderate to severe crohn's disease: Results from the uniti and IMUNITI phase 3 clinical trials. *Gastroenterology* 2016; **150**: S1004.

149. Schwartz D, Chernin E, Friger M, Sarid O, Vardi H, Greenberg D, et al. Surgery in adult Crohn's disease patients has limited impact on the medical and social burden of disease. *United European Gastroenterology Journal* 2015; **3**: A232-A3.

150. Schwartz D, Greenberg D, Chernin E, Sarid O, Slonim-Nevo V, Friger M, et al. Effect of medication type on patients' healthrelated quality of life in Crohn's disease. *Journal of Crohn's and Colitis* 2016; **10**: S407-S8.

151. Sherman M, Tsynman DN, Kim A, Arora J, Pietras T, Messing S, et al. Sustained improvement in health-related quality of life measures in patients with inflammatory bowel disease receiving prolonged anti-tumor necrosis factor therapy. *Journal of digestive diseases* 2014; **15**: 174-9.

152. Stjernman H, Granno C, Bodemar G, Jarnerot G, Ock, er L, et al. Evaluation of the Inflammatory Bowel Disease Questionnaire in Swedish patients with Crohn's disease. *Scandinavian journal of gastroenterology* 2006; **41**: 934-43.

153. Szepes Z, Farkas K, Horvath G, Hollosi R, Nagy F, Papp M, et al. Inflammatory bowel disease itself is a more important risk factor for impaired health-related quality of life than non-adherence to medical therapy. *Journal of Crohn's and Colitis* 2012; **6**: S161-S2.

154. Taxonera C, Lopez-Sanroman A, Vera MI, Nos P. Health-related quality of life improves during 1-year of postoperative prophylactic drug therapy after ileocecal intestinal resection in Crohn's disease patients: Results of the APPRECIA randomised trial. *Journal of Crohn's and Colitis* 2016; **10**: S406.

155. Taxonera C, Lopez-Sanroman A, Vera I, Nos P. Health-related quality of life improves during one year of postoperative prophylactic drug therapy after ileocecal intestinal resection in Crohn's disease patients: Results of the apprecia randomized trial. *Gastroenterology* 2016; **150**: S442-S3.

156. Timmer A, Kemptner D, Takses A, Klebl F, Jockel KH. A survey-based index was validated for measuring disease activity in inflammatory bowel disease. An evaluation study. *Journal of Clinical Epidemiology* 2009; **62**: 771-8.

157. Toruner M, Basaranoglu M, Atug O, Senturk O, Akyuz F, Unsal B, et al. Anti-TNF treatments in Crohn's disease and improvement in work productivity and quality of life: An observational study from Turkey. *Journal of Crohn's and Colitis* 2017; **11**: S281.

158. Toya Y, Yanai S, Matsumoto T. Assessment of QOL using internet web system in Japanese patients with Inflammatory Bowel Disease: The 3I survey. *Journal of Crohn's and Colitis* 2015; **9**: S128.

159. Vardi H, Friger M, Sarid O, Greenberg D, Schwartz D, Slonim-Nevo V, et al. Characterization of variables impacting on the quality of life of israeli patients with crohn's disease. *Gastroenterology* 2015; **148**: S843.

160. Vermeire S, Loftus EV, Colombel JF, Feagan B, born W, s B, et al. Long-term effectiveness and safety of vedolizumab in patients with Crohn's disease: 5-year cumulative exposure of GEMINI 2 completers rolling into the GEMINI open-label extension study. *Journal of Crohn's and Colitis* 2017; **11**: S39.

161. Vermeire S, Loftus EV, Colombel JF, Feagan BG, born WJ, s BE, et al. Long-term effectiveness and safety of vedolizumab in patients with Crohn's disease: 5-year cumulative exposure of GEMINI 2 completers rolling into the GEMINI open-label extension study. *Gastroenterology* 2017; **152**: S601.

162. Wang S, Jakubanis R, Piercy J, Skup M. Health-related quality of life, work productivity, and satisfaction with treatment amongst inflammatory bowel disease patients receiving adalimumab mono-versus adalimumab combotherapy. *Journal of Crohn's and Colitis* 2016; **10**: S388.

163. Wang Y, Ouyang Q, Wen Z, Hu R. Efficacy evaluation and predictors of response to infliximab in patients with Crohn's disease. *Journal of Gastroenterology and Hepatology* 2013; **28**: 373.

164. Worbes-Cerezo M, Nafees B, Lloyd AJ, Gallop K, Ladha I. A societal ut ility study to elicit values for adverse events and surgical co mplications in moderate to severe cro hn's disease in UK. *Value in Health* 2017; **20**: A637.

165. Wright EK, De Cruz PP, Kamm MA, Hamilton AL, Ritchie KJ, Krejany EO, et al. Intestinal resection in Crohn's disease is associated with significant and durable improvement in health related quality of life although to a lesser extent in women and smokers. Results from the POCER study. *Journal of Crohn's and Colitis* 2014; **8**: S56-S7.

166. Wright EK, De Cruz P, Kamm MA, Hamilton AL, Ritchie KJ, Krejany S, et al. Intestinal resection in crohn's disease is associated with significant and durable improvement in health related quality of life although to a lesser extent in women and smokers. Results from the POCER study. *Gastroenterology* 2014; **146**: S-435.

167. Xu J, Lin H, Feng X, Tang M, Shen J, Ran Z. Different therapeutic approaches on quality of life in patients with inflammatory bowel disease. *BMC Gastroenterol* 2014; **14**: 199.

168. Yarlas A, White M, Ingham M, Naessens D, Han C. Evidence of content validity and psychometric properties of SF-36 for measuring health-related quality of life of patients with Crohn's disease. *Journal of Crohn's and Colitis* 2016; **10**: S209.

169. Yarlas A, White M, Ingham M, Han C. Evidence of content validity and psychometric properties of SF-36 for measuring health-related quality of life of patients with Crohn's disease. *Gastroenterology* 2016; **150**: S444.

170. Yazdanpanah Y, Klein O, Gambiez L, Baron P, Desreuniaux P, Marquis P, et al. Impact of surgery on quality of life in Crohn's disease. *American Journal of Gastroenterology* 1997; **92**: 1897-900.

171. Zakharash MP, Mel'nik VM, Poida AI, Abu Shamsia RN, Ioffe AI, Zavernyi LG. Quality of life in patients after restorative operations. *Likars'ka sprava / Ministerstvo okhorony zdorov'ia Ukrainy* 2007: 70-5.