1995 IFX-cA2

Open-label study /single IFX IV dose 10mg/kg or 20mg/kg/ CD/ Induction Conclusion:

Treatment with cA2 was safe and may be useful in patients with Crohn's disease who do not respond to steroids.

1997 IFX

RCT /single dose of IFX 5 mg/kg vs IFX 10mg/kg vs 20mg/kg vs placebo/ CD/ Induction Conclusion:

A single infusion of cA2 was effective in the short-term in moderate-severe Crohn's disease.

1999 IFX

RCT/ Responders to 1 dose randomized to 10mg/kg q8w or placebo /CD/ Maintenance Conclusion:

Long-term treatment with IFX is better than placebo maintaining remission in Crohn's disease.

1999 IFX-Fistula

RCT/ IFX+5mg/kg vs 10mg/kg vs placebo/ fistulizing CD/ Induction Conclusion:

Infliximab is an efficacious treatment for fistulas in patients with CD.

2002 ACCENT I

RCT /After response to 1 dose IFX: IFX 5mg/kg vs 10mg/kg vs placebo/ CD/ Maintenance Conclusion:

CD who respond to an initial dose of infliximab more likely to be in remission at w30 & 54, to discontinue corticosteroids, & maintain response, if IFX is maintained q8w.

ACCENT II 2004 2005 ACT I&II REACH 2007 SUTD 2008 2009 IFX-postop

RCT /Responders at w10 randomized to: IFX 5mg/kg q8w vs placebo/ CD/ Maintenance Conclusion:

Patients with fistulizing CD who have a response to induction therapy with IFX have an increased likelihood of a sustained response over a 54-week period if iIFX treatment is continued every 8 weeks.

RCT / IFX 5 mg/kg vs IFX 10mg/kg vs placebo/ Mod-Severe UC/ Induction & Maintenance Conclusion:

IFX at w0,2&6 and q8w thereafter better achieving clinical response at w8,30&54 compared to placebo in mod-severe UC.

OL/ IFX 5 mg/kg q8w vs IFX 5mg/kg q12w after induction Mod-sev pediatric CD/ Induction&Maintenance Conclusion:

IFX in pediatric CD q8w more likely to achieve clinical response & remission at w54 than q12w

Open randomized trial/ IFX+AZA vs conventional (steroids)/ New CD/ Induction remission Conclusion:

Combo therapy more effective than conventional for induction & reduction of steroid use in recently diagnosed CD.

RCT/ IFX vs placebo after ileocolonic resection/ CD/ Disease recurrence Conclusion:

Administration of infliximab after intestinal resective surgery was effective at preventing endoscopic and histologic recurrence of Crohn's disease.

2010 SONIC

RCT/ IFX vs AZA vs IFX+AZA/ Mod-Severe CD/ Remission
Conclusion:
tients with mod-severe CD treated with IFX+ AZA or IFX monotherapy were mo

Patients with mod-severe CD treated with IFX+ AZA or IFX monotherapy were more likely to have steroid free remission than AZA alone. Combotherapy superior to both monotherapies.

2012 IFX-postop

Open label / IFX 5mg/kg induction and q8w vs placebo after surgery/ CD/ Disease recurrence Conclusion:

An early intervention with IFX monotherapy should prevent clinical, serological, and endoscopic CD recurrence following ileocolic resection. Thiopurine naivety and eliminating the initial loading dose of IFX might minimize serious AEs.

2012 STORI

Prospective cohort/ stop IFX in CD in remission & maintenance on AZA/ Relapse Conclusion:

Aprox 50% of patients with CD treated for a year with IFX+AZA relapsed within 1 year after discontinuation.

2012 SWITCH

OL/ IFX vs switch to ADA/ CD/ Relapse Conclusion:

Elective switching from IFX to ADA associated with loss of tolerance and loss of efficacy within 1 year.

Adherence to the first antiTNF is recommended.

OL RCT/Ciclosporin vs IFX/ASUC/Induction Conclusion:

Ciclosporin was not more effective than IFX in patients with ASUC refractory to intravenous steroids. In clinical practice, treatment choice should be guided by physician and centre experience.

2012

CYSIF

2013 IFX kids

2013

AZA-IFX postop

2014 UC-SUCCESS

2014 COMMIT

2014 ADA-IFX postop

Open label/ IFX 5mg/kg /pediatric UC / Induction Conclusion:

IFX shows similar pharmacokinetics and exposure/response in kids and adults. A positive relationship was noted between serum infliximab level and clinical effect following induction therapy similar to adults.

Open label/IFX standard dose vs AZA 2.5mg/kg/d / CD /Disease relapse Conclusion:

Infliximab was more effective than azathioprine in reducing histological, but not endoscopic and clinical recurrence after curative ileocolonic resection in "high risk" CD patients.

RCT/AZA vs IFX vs AZA+IFX / UC/ Induction Conclusion:

IFX+AZA combotherapy superior to IFX or AZA alone achieving steroid free remission w16.

RCT/IFX+MTX vs IFX alone/ CD Conclusion:

The combination of infliximab and methotrexate, although safe, was no more effective than infliximab alone in patients with CD receiving treatment with prednisone.

OL RCT/IFX vs ADA /postsurgery CD/ Disease recurrence Conclusion:

IFX and ADA were similar in preventing histological, endoscopic and clinical recurrence after curative ileocolonic resection in high risk CD patients.

2015 TAXIT

2015 REACT

2016 CONSTRUCT

2016 PREVENT

2017 ENCORE-CD

RCT/IFX dose change based on clinical symptoms or trough concentration/IBD remission 1year Conclusion:

Targeting IFX TCs to 3–7 mg/mL results in a more efficient use of the drug. After dose optimization, continued concentration-based dosing was not superior to clinically based dosing for achieving remission after1 year, but was associated with fewer flares during the course of treatment.

OL RT/ antiTNF+AZA early treatment vs conventional/ CD/ Maintenance Conclusion:

Lower risk of major adverse outcomes in early combined immunosuppresion in CD vs conventional treatment. However, no differences in remission rates at 12 months.

OL RT/ IFX vs cicloscporin/ ASUC Conclusion:

There was no significant difference between ciclosporin and infliximab in clinical effectiveness.

RCT/ IFX vs placeboy/ posturgical CD / Disease recurrence Conclusion:

IFX is not superior to placebo in preventing clinical recurrence after CD-related resection. However, infliximab does reduce endoscopic recurrence

Observational/ IFX vs conventional treatment/ CD / Safety Conclusion:

IFX exposure related to increased risk of infections & haematological conditions, whereas mortality may be decreased.

2017 NOR-SWITCH

Phase 4/ CT-P13/ IMIDs/ non-inferiority Conclusion:

Switching from IFX originator to CT-P13 was not inferior to continued treatment with IFX originator.

2017 LIRIC

OL-RCT/ IFX vs Surgery/ active ileal CD / QoL Conclusion:

No differences in: QoL at 12 months, social life problems, hospital admission between IFX vs Surgery. Laparoscopic resection in limited (<40 cm) ileocaecal CD, could be considered as an alternative to IFX.

2018 SECURE

Open label RCT/In remission at w30 onIFX originator switch to CT-P13/ IBD Conclusion:

Switching to CT-P13 is safe and well tolerated in patients with inflammatory bowel disease in remission.

2018 TEDDY

Observational/ antiTNF exposed newborn/ IBD/ Safety Conclusion:

In utero exposure to anti-TNF drugs does not seem to be associated with increased short-term or long-term risk of severe infections in children.

Open laber RCT/ IFX vs placebo/ postsurgical CD / Disease recurrence Conclusion:

The postoperative use of IFX is effective in preventing Crohn's disease recurrence for 2 years.

2018

IFX-postop

## **INFLIXIMAB VII**

**TAILORIX** 2018 PANTS 2019 CT-P13 2019 PISA-I 2020 2020 PIANO

Proof-of-concept RCT / IFX/ CD/ Steroid-free remission Conclusion:

Increasing dose of IFX based on a combination of symptoms, biomarkers, and serum drug concentrations does not lead to corticosteroid-free clinical remission in a larger proportion of patients than increasing dose based on symptoms alone

Observational/ antiTNF/CD/ Predictors of failure Conclusion:

Anti-TNF treatment failure is common & is predicted by low drug concentrations, mediated in part by immunogenicity.

RCT/ IFX originator vs CT-P13/ CD/ Induction Conclusion:

This study showed non-inferiority of CT-P13 to infliximab in patients with active Crohn's disease.

Biosimilar CT-P13 could be a new option for the treatment of active Crohn's disease.

Open label RCT/seton drainage vs IFX vs seton+IFX/ perianal CD/ Induction and Maintenance Conclusion:

The results imply that chronic seton treatment should not be recommended as the sole treatment for perianal Crohn's fistulas (study stopped due to futility as antiTNF showed clear superiority)

Observational/Biologics &/or thiopurines/ IBD pregnant/ Safety Conclusion:

Biologic, thiopurine, or combination therapy exposure during pregnancy was not associated with increased adverse maternal or fetal outcomes at birth or within the first year of life.

## **INFLIXIMAB VIII**

2021 **GARDENIA PRECISION** 2021 2021 IFX IV/SC **CLARITY** 2021

STOP-IT

2022

Phase 3/ ETR vs IFX/ UC/ Maintenance Conclusion:

Etrolizumab did not met primary endpoint for superiority against IFX in clinical response w10 &clinical remission w54.

RCT/IFX dosing guided by Bayesian pharmacokinetic vs standard /IBD patients in remission / Maintenance Conclusion:

The use of a Bayesian dashboard for IFX dosing in maintenance treatment for IBD reduced the incidence of LOR compared to standard dosing. Precision dosing also resulted in lower FCP levels.

RCT/ IFX (CT-P13) IV vs SC /IBD/ Maintenance Conclusion:

The pharmacokinetic non-inferiority of CT-P13 SC to CT-P13 IV, and the comparable efficacy, safety, and immunogenicity profiles, support the potential suitability of CTP13 SC treatment in IBD.

Observational/ Biologis and immunosupressants/ IBD and SARS-CoV2/ antibody response Conclusion:

IFX is associated with attenuated serological response to SARS-CoV-2 that were further blunted by immunomodulators used as concomitant therapy.

RCT/Stop IFX/ CD/ Relapse Conclusion:

Discontinuation of infliximab for patients with Crohn's disease receiving long-term infliximab therapy and in clinical, biochemical, and endoscopic remission leads to a considerable risk of relapse.

## **INFLIXIMAB IX**

2022 PUCCINI VIP 2022 REMSWITCH 2022 2022 **TISkids** PISA-II 2022

Observational /AntiTNF/ IBD needing surgery / Infection risk Conclusion:

Preoperative antiTNF exposure was not associated with postoperative infectious complications in a large prospective multicenter cohort.

Observational /Biologics & immunosupressants/ IBD and COVID vaccine / Response to vaccine Conclusion:

For patients with IBD, the immunogenicity of COVID-19 vaccines varies according to immunosuppressive drug exposure, and is attenuated in recipients of IFX, IFX+thiopurines and TOFA.

Observational/ IFX subcut/ IBD in remission/ relapse Conclusion:

Switching from IV to SC IFX 120 mg every other week is safe and well accepted, leading to a low risk of relapse in IBD patients except for those receiving 10 mg/kg q4w requiring 240 mg every other week.

RCT/ IFX /paediatric CD/Induction Conclusion:

First line-IFX was superior to conventional treatment in achieving short-term clinical and endoscopic remission, and had greater likelihood of maintaining clinical remission at week 52 on azathioprine monotherapy.

RT/antiTNF and surgical closure or antiTNF alone/ CD perianal / Long term response Conclusion:

Short-term anti-TNF treatment combined with surgical closure induces long-term MRI healing more frequently than anti-TNF therapy in patients with CD and perianal fistulas.

SPARE

## OL RCT/antiTNF or AZA withdrawal/ CD Conclusion:

IFX withdrawal should only be considered after careful assessment of risks/benefits, whereas withdrawal of immunosuppressant therapy could generally be preferable when considering de-escalation.

