**RESULTS**

We have published our successful experience with using VNS in rheumatoid arthritis (Koopman, 2016).

The autonomic nervous system regulates innate and adaptive immunity1. Activation of its efferent arm, the Cholinergic Enteric neurotransmitters, triggers a signal through the vagus nerve to the splenic nerve and enteric nerves which are involved in the modulation of systemic inflammation.

### METHODS

**CONCLUSIONS**

SES-CD from 24.5 (17.1-29.0) to 19.0 (13.5-28.5). There were 3/5 patients with CDAI-100 response, 2/5 with CDAI ≥ 150 response. The study was stopped after 16 weeks due to CDAI remission in 6 of 8 patients.

**Efficacy endpoints**

- Rate of clinical response at Week 16
- Rate of clinical remission at Week 16
- Change in total SES-CD score from baseline to Week 16

**Exploratory endpoints**

- Calprotectin (LF/ HF (% Week 0)
- Heart rate variability parameters (LF/ HF (%)
- Echocardiographic parameters (50th/75th)
- Clinical parameters (BMI, Hb level, C-reactive protein, CRP, etc.)

**REFERENCES**


**CONCLUSIONS**

- The TNF release was reduced with treatment,
- SES-CDs were centrally read, and had showed significant improvements in 6 of 8 patients.
- The CDAI scores were reduced by 70 points in 6 of 8 patients.
- The TNF release was reduced with treatment, consistent with in vivo pharmacodynamic data.
- The TNF release was reduced with treatment, consistent with our experience.

**IMPLICATIONS**

- This study has shown VNS as an alternative treatment for Crohn’s patients who have failed conventional treatments.

- On the basis of these findings a larger controlled study should be performed.