Summary of amendments from the original protocol

Original protocol

The original protocol was submitted to, and approved by the Research Ethical Board of the University Medical Center Groningen, the Netherlands. Approval was obtained 5 November 2015, before the start of the trial.

The final protocol

The final protocol "*Study protocol for a randomized controlled multicentre study: the Foraminotomy ACDF Cost-Effectiveness Trial (FACET) in patients with cervical radiculopathy"* was submitted to *BMJ Open* 26 May 2016, accepted 14 October 2016 and published online 5 January 2017.

Summary of changes

The context of the original protocol was recorded in The Netherlands Trial Register (NTR5536, posted on the 26th of November 2015). Five important changes in the final protocol compared to the original protocol were:

- In the original protocol the primary objective is described as: *"Is the posterior cervical foraminotomy (FOR) technique effective in comparison to the anterior cervical discectomy with fusion (ACDF) with regards to reduction of cervical radicular pain measured by the ODOM criteria (4 point Likert Scale) and VAS arm pain"*. In the additional statistical paragraph, the noninferiority design is described. In the published protocol, no objective but aims and hypotheses are given, with the primary hypothesis being *"the effectiveness of the FOR technique is noninferior compared with the ACDF technique"*
- In the published protocol an additional exclusion criterion is given, being: *"pure axial neck pain without radicular pain".*
- In the published protocol *"The surgeon has the choice to carefully coagulate and divide the venous plexus that covers the nerve sheath"* was added to the description of the FOR technique.
- In the published protocol the primary study parameters are referred to as "operative success" (post-operative decrease in radiculopathy assessed by the VAS for self-reported arm pain) and "patient success" (assessed by the modified Odom criteria).

- In the published protocol 7 participating centers are mentioned, while in the original protocol 6 participating centers are described. This difference is because one center had two locations, which were both added because of separate research ethical boards (the Radboud University Center Nijmegen and Carnisius Wilhemina Hospital).

Further changes in the final (published) protocol are mainly textual, including more detailed descriptions and more information on practical implementation of the trial. Two examples are as followed:

Original protocol	Final (published) protocol
Exclusion criterion *"median located disc protrusion or osteophytic protrusion"*	Exclusion criterion *"Median located disc protrusion or osteophytic protrusion (median located protrusion is defined as >1/3 of the total discogenic component is located medially within the spinal canal"*
Description of the FOR technique: *"In cases of pure soft discs, the proximal root is visualized adequately for removal of the compressing disc material."*	Description of the FOR technique: *"In cases of soft disc compressions, the proximal root is visualized adequately and mobilized to allow the removal of the compressing disc material. However, complete removal of the soft disc component is not strictly necessary and the decision to remove the soft component will be left to the surgeon's preference"*

After publication of the protocol, the protocol was amended 3 times:

1. 3 medical centers were added (this amendment was accepted on the 2nd of August 2017)
    - Northwest Clinics (NWZ),Alkmaar
    - Haga Teaching Hospital, The Hague
    - Elisabeth-Tweesteden Ziekenhuis, Tilburg

2. An inclusion criterion was clarified, changing *malignant obesity to obesity WHO II or higher (BMI>35)* (this amendment was accepted on the 28th of November 2017)

In our original protocol we defined "*malignant obesity (BMI>30)"* as an exclusion criterion for the FACET study. This definition was unfortunately not correct, because it is a contradiction in terms. It caused discussion among our participating medical centers and the people

monitoring our study. Therefore, we decided to clarify the definition in our protocol to "*obesity WHO class II or higher (BMI≥35)"*. Commonly, morbid obesity is classified as a BMI ≥40 without comorbidities or BMI ≥ 35 with comorbidities. It is known that morbidly obese patients have more post-surgical complications, mainly because of the accompanied comorbidities. In case of cervical spine surgery, a posterior foraminotomy is not preferred in morbidly obese patients. This is because the posterior foraminotomy is performed in a prone position and patients with morbid obese would be difficult to place in this position, which would lead to more time needed in the operation room. Additionally, the prone position itself gives more risk during the surgery, because of more anesthesiologic challenges and a higher chance of pressure-related complications. Unfortunately, there is no literature regarding an optimal cut-off point in BMI for posterior versus anterior approached in cervical spine surgery. Therefore, we decided to exclude patients with obesity class II or higher, since they would not be equally suitable for both approached and should not be randomized in the light of our study.

3. To account for the premature ending of the inclusion due to COVID-19 related cancellation of non-emergent health care (this amendment was accepted on the 9th of December 2021)

During the trial, a lower inclusion rate was observed and several measures to improve inclusion were taken. This included frequent newsletters, defined instructions for surgeons to include participants and the enrollment of additional medical centers. Nonetheless, a delay in inclusion could not be fully alleviated. When also the COVID-pandemic started, with an extreme reduction of non-emergent health care, an interim analysis was performed by a statistician who was not involved in the study design. This interim analysis indicated that it was safe to end the inclusion at 86% of the predefined sample size with a low risk of false negatives.