

THEORETICAL-PRACTICAL COURSE:

Surgical Navigation – Clinical Residency

(Dr. Armando Lopes)

16 hours

2 DAYS

ON SITE

Training Dates:

Start (10/11/2022) – Ending (11/11/2022)

Framework:

This 2-day Residency Program focuses specifically on Navigation Implant Surgery and was designed especially for those who want to keep-up with the latest technology and introduce this valuable tool in their daily practice.

Comprising hands-on software sessions, the training will give clinicians a comprehensive perspective of the Implant Navigation System workflow, and its features and advantages, guiding them through single, partial and total rehabilitation cases planning and execution. Participants will get a chance to follow LIVE Surgery in the operation room, interacting closely with our clinical team, also getting a chance to discuss and plan their own cases with our expert.

Participants |

Requirements: Professionals experienced in implant dentistry.

General objectives:

At the end, trainees should be able to:

1. Implement navigated surgery for single teeth, partial and full-arch (All-on-4 Concept) implant-supported rehabilitations.
2. Differentiate the treatment options for single teeth, partial, and full-arch (All-on-4 Concept) rehabilitations in the maxilla/mandible;
3. Recognize the different clinical and surgical steps of single, partial and full-arch (All-on-4 Concept) implant-supported rehabilitations;
4. Implement the main surgical steps in an All-on-4 rehabilitation in the maxilla/mandible.

Specific objectives:

At the end, trainees should be able to:

- 1.1 Identify the essential steps of navigated surgery integrating planning information in the DTX Studio Implant Software to the C-Guide Dynamic Navigation device;

1.2 Recognize the essential procedures for performing surgery with Dynamic Navigation through X-Guide;

2.1 Recognize the difference between single, partial and full-arch rehabilitations (including the different All-on-4 configurations);

2.2 Identify the advantages and disadvantages of each rehabilitation options;

3.1 Evaluate the pre-treatment phase (planning) considering the anatomical limitations in single, partial, and full-arch (All-on-4 Concept) implant-supported rehabilitations;

3.2 Identify the essential steps during surgery (Incision, flap elevation, bone reduction, implant-site preparation, implant insertion, abutment connection, suturing);

3.3 Identify the essential steps of prosthetic options for the provisional prosthesis using a pre-made prosthesis or a new fabricated prosthesis (impression tacking, implant position/cylinder caption, prosthetic try-in, prosthetic connection, occlusion check);

4.1 To evaluate the anatomical limitations involved in the All-on-4 rehabilitation in the maxilla/mandible;

4.2 To perform a proper implant site preparation procedure;

4.3 To correctly insert the implants following the All-on-4 configuration;

4.4 To correctly connect the specific abutments to the implants following the All-on-4 configuration (straight abutments on the anterior implants and tilted abutments on the posterior implants).

Modules Program Contents	Workload (h)	
	Theory	Practice
<ul style="list-style-type: none"> MODULE 1: NAVIGATION SYSTEM IN SINGLE TEETH AND PARTIAL IMPLANT-SUPPORTED REHABILITATIONS: WORKFLOW, TREATMENT PLANNING, PRE-TREATMENT, SURGICAL AND POST-TREATMENT CONSIDERATIONS, CLINICAL CASES 	4	
<ul style="list-style-type: none"> MODULE 2: NAVIGATION SYSTEM HANDS-ON 		4
<ul style="list-style-type: none"> MODULE 3: NAVIGATION SYSTEM IN THE ALL-ON-4 CONCEPT: WORKFLOW, TREATMENT PLANNING, PRE-TREATMENT, SURGICAL AND POST-TREATMENT CONSIDERATIONS, CLINICAL CASES 	4	
<ul style="list-style-type: none"> MODULE 4 – THE ALL-ON-4 CONCEPT SURGICAL HANDS-ON 		4
<i>Total</i>	8	8
	16 H	

Training Methodology: The course includes a face-to-face component with a total duration of 16 hours, organized into theoretical and practical sessions, in conjunction with a training component of direct learning in the context of surgery through live viewing the surgeries that will take place in the operating room. The trainees accompany the medical team for 2 days, absorbing the clinical practices better in the on-job context. In the face-to-face component, the training methodology will be centered on the articulation of the expository, interrogative, demonstrative and active method, in order to enhance the appropriation of the course contents, based on the analysis of real cases. The training will give clinicians a comprehensive perspective of the Implant Navigation System workflow.

Attendance and Punctuality Rules:

Attendance in the face-to-face component of training must be 100%.
In the face-to-face component of the training, each training session has an associated tolerance of 15 minutes after the start defined for its beginning.

Evaluation methodology:

The assessment of trainees' learning is carried out throughout the course, and the final classification results from the trainee's performance in the modules 2 and 4, whose weights in the final grade have different weights: module 2- 10 points and module 4 – 10 points

Training Mode:

Other continuous training actions (not included in the National Qualifications Catalogue)

Form of Organization:

On Site- Presential

Spaces and Logistics Requirements:

On-site Training:

- Theoretical Component - Room with good lighting, ventilation, temperature and isolated from disturbing noises to the proper functioning of the training sessions, equipped with all the necessary didactic-pedagogical resources (computer, LCD, sound equipment, video system, whiteboard/flipchart and pens, Wi-Fi network), as well as all the technical equipment associated with the themes of the various modules that make up the course.
- Practical Component - Hands-On room and medical office space properly equipped with all the equipment and utensils necessary for clinical practice. Following Live cases at the Operating room with the Navigation System.

Didactic and Pedagogical Resources:

Theoretical room- Computer, LCD, sound equipment, video system, whiteboard/flipchart and pens, Wi-Fi network;
Hands-On room - Osseosets with contra-angle; Prosthesis Kits; Surgery Kits; Surgery Model with Dummy Implants; Acetate Pen/Marker; Disposable Scalpels and Scissors; Multi-unit abutments; 30º Multi-unit abutments; Masks with Visor; Disposable gloves; Surgical Fields; engines and Hands-on Software Training Navigation system.

Learning support: Video Lectures, Reference bibliography, scientific articles:

- Maló P, Lopes I, De Araújo Nobre M. The All-on-4 Concept. In: Babbush CA, Hahn JA, Krauser JT, eds. Dental Implants: The Art and Science. Maryland Heights, USA: Saunders Elsevier, 2011: 435-447.

- Maló P, de Araújo Nobre M, Lopes A. An overview of the All-on-4™ implant philosophy. Faculty Dental Journal, January 2012; 3: 20–27. DOI 10.1308/204268512X13207759526256.
- Ferro AS, de Araújo Nobre MA, Simões R. Ten-year follow-up of full-arch rehabilitations supported by implants in immediate function with nasal and full-length palatine bicortical anchorage on the anterior maxilla. J Oral Sci. 2022;64(2):129–134. doi:10.2334/josnugd.21-0378
- de Araújo Nobre M, Lopes A, Antunes E. The 10 Year Outcomes of Implants Inserted with Dehiscence or Fenestrations in the Rehabilitation of Completely Edentulous Jaws with the All-on-4 Concept. J Clin Med. 2022;11(7). doi:10.3390/jcm11071939
- de Araújo Nobre M, Moura Guedes C, Almeida R, Silva A, Sereno N. Hybrid Polyetheretherketone (PEEK)-Acrylic Resin Prostheses and the All-on-4 Concept: A Full-Arch Implant-Supported Fixed Solution with 3 Years of Follow-Up. J Clin Med. 2020;9(7):2187. doi:10.3390/jcm9072187
- Lopes A, de Araújo Nobre M, Santos D. The Workflow of a New Dynamic Navigation System for the Insertion of Dental Implants in the Rehabilitation of Edentulous Jaws: Report of Two Cases. J Clin Med. 2020;9(2). doi:10.3390/jcm9020421
- Maló P, de Araújo Nobre M, Lopes A, Ferro A, Nunes M. The All-on-4 concept for full-arch rehabilitation of the edentulous maxillae: A longitudinal study with 5-13 years of follow-up. Clin Implant Dent Relat Res. 2019;21(4):538–549. doi:10.1111/cid.12771
- de Araújo Nobre M, Salvado F, Nogueira P, Rocha E, Ilg P, Maló P. A Peri-Implant Disease Risk Score for Patients with Dental Implants: Validation and the Influence of the Interval between Maintenance Appointments. J Clin Med. 2019;8(2):252. doi:10.3390/jcm8020252
- Maló P, de Araújo Nobre M, Lopes A, Ferro A, Botto J. The All-on-4 treatment concept for the rehabilitation of the completely edentulous mandible: A longitudinal study with 10 to 18 years of follow-up. Clin Implant Dent Relat Res. 2019;21(4):565–577. doi:10.1111/cid.12769
- Maló P, Lopes A, de Araújo Nobre M, Ferro A. Immediate function dental implants inserted with less than 30 N-cm of torque in full-arch maxillary rehabilitations using the All-on-4 concept: retrospective study. Int J Oral Maxillofac Surg. 2018;47(8). doi:10.1016/j.ijom.2018.04.008
- Maló PS, de Araújo Nobre MA, Ferro AS, Parreira GG. Five-year outcome of a retrospective cohort study comparing smokers vs. Nonsmokers with full-arch mandibular implant-supported rehabilitation using the All-on-4 concept. J Oral Sci. Published online 2018. doi:10.2334/josnugd.16-0890
- Maló P, de Araújo Nobre M, Moura Guedes C, et al. Short-term report of an ongoing prospective cohort study evaluating the outcome of full-arch implant-supported fixed hybrid polyetheretherketone-acrylic resin prostheses and the All-on-Four concept. Clin Implant Dent Relat Res. 2018;20(5):692–702. doi:10.1111/cid.12662
- Hopp M, de Araújo Nobre M, Maló P. Comparison of marginal bone loss and implant success between axial and tilted implants in maxillary All-on-4 treatment concept rehabilitations after 5 years of follow-up. Clin Implant Dent Relat Res. 2017;19(5). doi:10.1111/cid.12526
- de Araújo Nobre M, Mano Azul A, Rocha E, Maló P, Salvado F. Attributable fractions, modifiable risk factors and risk stratification using a risk score for peri-implant pathology. J Prosthodont Res. 2017;61(1):43–53. doi:10.1016/j.jpor.2016.03.004



- de Araújo Nobre M, Maló P. Prevalence of periodontitis, dental caries, and peri-implant pathology and their relation with systemic status and smoking habits: Results of an open-cohort study with 22009 patients in a private rehabilitation center. *J Dent.* 2017;67. doi:10.1016/j.jdent.2017.07.013
- Lopes A, Maló P, de Araújo Nobre M, Sánchez-Fernández E, Gravito I. The NobelGuide®All-on-4®Treatment Concept for Rehabilitation of Edentulous Jaws: A Retrospective Report on the 7-Years Clinical and 5-Years Radiographic Outcomes. *Clin Implant Dent Relat Res.* 2017;19(2). doi:10.1111/cid.12456
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- Maló P, de Araújo Nobre M, Lopes A. Three-Year Outcome of Fixed Partial Rehabilitations Supported by Implants Inserted with Flap or Flapless Surgical Techniques. *J Prosthodont.* 2016 Jul;25(5):357–63. doi: 10.1111/jopr.12400. Epub 2015 Nov 20.
- Maló P, Nobre MA, Lopes A, Ferro A, Gravito I. Complete edentulous rehabilitation using an immediate function protocol and an implant design featuring a straight body, anodically oxidized surface, and narrow tip with engaging threads extending to the apex of the implant: A 5-year retrospective clinica. *Int J Oral Maxillofac Implant.* 2016;31(1). doi:10.11607/jomi.4123
- Queridinha BM, Almeida RF, Felino A, de Araújo Nobre M, Maló P. Partial Rehabilitation with Distally Tilted and Straight Implants in the Posterior Maxilla with Immediate Loading Protocol: A Retrospective Cohort Study with 5-Year Follow-up. *Int J Oral Maxillofac Implants.* 2016 Jul-Aug;31(4):891–9. doi: 10.11607/jomi.4324.
- Nunes M, Almeida RF, Felino AC, Malo P, Nobre MA. The influence of crown-to-implant ratio on short implant marginal bone loss. *Int J Oral Maxillofac Implant.* 2016;31(5). doi:10.11607/jomi.4336
- Maló P, de Araújo Nobre M, Lopes A, Rodrigues R. Preliminary report on the outcome of tilted implants with longer lengths (20–25mm) in low-density bone: One-year follow-up of a prospective cohort study. *Clin Implant Dent Relat Res.* 2015;17(S1):e134–142. doi:10.1111/cid.12144
- de Araújo Nobre M, Mano Azul A, Rocha E, Maló P. Risk factors of peri-implant pathology. *Eur J Oral Sci.* 2015;123(3):131–139. doi:10.1111/eos.12185
- Maló P, de Araújo Nobre MA, Lopes AV, Rodrigues R. Immediate loading short implants inserted on low bone quantity for the rehabilitation of the edentulous maxilla using an All-on-4 design. *J Oral Rehabil.* 2015;42(8). doi:10.1111/joor.12291
- Maló P, de Araújo Nobre M, Lopes A, Ferro A, Gravito I. All-on-4® Treatment Concept for the Rehabilitation of the Completely Edentulous Mandible: A 7-Year Clinical and 5-Year Radiographic Retrospective Case Series with Risk Assessment for Implant Failure and Marginal Bone Level. *Clin Implant Dent Relat Res.* 2015;17. doi:10.1111/cid.12282
- Maló P, De Araujo Nobre M, Lopes A, Rodrigues R. Double Full-Arch Versus Single Full-Arch, Four Implant-Supported Rehabilitations: A Retrospective, 5-Year Cohort Study.; 2015. doi:10.1002/9781119115397.ch15
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