

THEORETICAL-PRACTICAL COURSE:

Clinical Residency All-on-4®

(Dr. Armando Lopes, Dra. Ana Ferro)

16 hours

2 DAYS

ON SITE

Training Dates:

Start (13/10/2022) – Ending (14/10/2022)

Framework: The All-on-4® concept is one of the breakthroughs in Implant Dentistry, allowing the rehabilitation of the majority of edentulous arches without the need of bone grafting. Created at MALO CLINIC, the All-on-4® concept it is backed up by more than 20 years of clinical research with excellent long-term results.

The secret for that success has been the constant evolution of the protocols that receive great attention from our side. Today, the All-on-4® concept is up to date with the digital revolution in Implant Dentistry, allowing to upgrade surgical and prosthodontic protocols following a full digital workflow.

Our Clinical Residencies are typically for much smaller groups of participants with a lot more focus on the daily work of the clinic rather than on lectures and pure training programs. The participant can observe surgeries or other treatments, or follow the surgical procedures via CCTV. The program may include the MALO CLINIC Protocol (All-on-4® surgical protocol + MALO CLINIC Bridge), immediate function single and partial, and fixed prosthodontics, as well as other procedures of the various specialties of dentistry.

Participants |

Requirements: Professionals experienced in implant dentistry.

General objectives:

At the end, trainees should be able to:

1. Differentiate the several treatment options for full-arch rehabilitation in the maxilla/mandible
2. Recognize the different clinical and surgical steps of the procedure
3. Identify the main prosthetic options for the All-on-4 rehabilitation in the maxilla /mandible
4. To implement the main surgical steps in an All-on-4 rehabilitation in the maxilla/mandible
5. To implement the main prosthetic steps in an All-on-4 rehabilitation in the maxilla/mandible producing a functional and aesthetic acrylic resin prosthesis

Specific objectives:

- At the end, trainees should be able to:
- 1.1 Recognize the difference between full-arch rehabilitation using more than 4 standard in axial position, using the different All-on-4 configurations, using bone grafting, using zygomatic implants (only in maxilla);
 - 1.2 Identify the advantages and disadvantages of each rehabilitation option;
 - 2.1 Evaluate the pre-treatment phase (planning) considering the anatomical limitations;
 - 2.2 Identify the essential steps during surgery (Incision, flap elevation, bone reduction, implant-site preparation, implant insertion, abutment connection, and suture).
 - 3.1 Identify the essential steps of prosthetic options for the provisional prosthesis using a pre-made prosthesis (impression tacking, cylinder caption, prosthetic try-in, prosthetic connection, occlusion check).
 - 3.2 Identify the essential steps of prosthetic options for the provisional prosthesis using a new fabricated prosthesis (impression tacking, implant-position capture, 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).
 - 5.1 To correctly perform a cylinder caption without compromising passive fit;
 - 5.2 To correctly remove the metal excess from the cylinders achieving a smooth surface;
 - 5.3 To correctly produce acrylic-resin during the correct curing time (below 2 minutes);
 - 5.4 To achieve a smooth surface on the interface between prosthesis and the model's surface.

Modules Program Contents	Workload (h)	
	Theoretic	Practice
<ul style="list-style-type: none"> • MODULE 1 – THE ALL-ON-4 CONCEPT IN THE MANDIBLE: PRE-TREATMENT, SURGICAL AND POST-TREATMENT CONSIDERATIONS 	4	
<ul style="list-style-type: none"> • MODULE 2 – THE ALL-ON-4 CONCEPT SURGICAL HANDS-ON 		4
<ul style="list-style-type: none"> • MODULE 3 – THE ALL-ON-4 CONCEPT IN THE MAXILLA: PRE-TREATMENT, SURGICAL AND POST-TREATMENT CONSIDERATIONS 	4	

Modules Program Contents	Workload (h)	
	Theoretic	Practice
<ul style="list-style-type: none"> MODULE 4 – THE ALL-ON-4 CONCEPT PROSTHODONTIC 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 Access to the course includes a series of 7 lectures online with the name MALO CLINIC: ALL-ON-4® | Complete course that must be viewed and studied by trainees before starting the course MALO CLINIC Protocol: ALL-ON-4®. These lectures can be found on the Education platform

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 – Medical office space properly equipped with all the equipment and utensils necessary for clinical practice. Following Live cases at the Operating room (All-on-4® Non- Guided) and following Live cases at the Operating room (All-on-4® X- Guide)

Didactic and Pedagogical Resources:

Theoretical room- Computer, LCD, sound equipment, video system, whiteboard/flipchart and pens, Wi-Fi network; Lectures online with the name MALO CLINIC: ALL-ON-4® | Complete course.

Hands-On 1st day:

- Osseosets with contra-angle; Surgery Kits;
- Surgery Model with Dummy Implants; Multi-unit abutments; 30º Multi-unit abutments; 3 D printed anatomical models of real patient.

Hands-On 2nd day:

- Laboratory Handpiece; Prosthesis Kits; Prosthesis to Rebase; Temporary coping Multi-unit; Multi-unit abutment plus; Guide-pin multi-unit; Lab-screw multi-unit; Dental Dam; Acetate Pen/Marker; Dental Dam Punch; Scalpels and Scissors; Unifast Pink + Liquid (1 bottle of powder + liquid on the stand); Pipettes; Spatula ;Syringe; Syringe Tip (Ultradent White Mac);Brush Handles; Brush Tips; Black tungsten drill; Blue tungsten drill; Gray Polishing Rubber; Yellow Polishing Rubber; Cotton buffs; Silicone cup for mixing Acrylic; Mandrel; Carburundo Cutting Disc; Visor masks; Disposable gloves; Surgical Fields.

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/josnusd.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
- 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.jiom.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/josnusd.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
- 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
- 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
 - Maló P, de Sousa ST, De Araújo Nobre M, et al. Individual Lithium Disilicate Crowns in a Full-Arch, Implant-Supported Rehabilitation: A Clinical Report. *J Prosthodont.* 2014;23(6). doi:10.1111/jopr.12137
 - Nobre de AM, Maló PS, Oliveira SH. The influence of implant location and position characteristics on peri-implant pathology. *Eur J Prosthodont Restor Dent.* 2014;22(3).
 - de Araújo Nobre MA, Maló PS, Oliveira SH. Associations of clinical characteristics and interval between maintenance visits with peri-implant pathology. *J Oral Sci.* 2014;56(2).
 - De Araújo Nobre M, Maló P, Antune E. Influence of systemic conditions on the incidence of periimplant pathology: A case-control study. *Implant Dent.* 2014;23(3). doi:10.1097/ID.0000000000000071
 - De Araújo Nobre MA, Maló P. The Influence of Rehabilitation Characteristics in the Incidence of Peri-Implant Pathology: A Case-Control Study. *J Prosthodont.* 2014;23(1). doi:10.1111/jopr.12114
 - Maló P, Nobre MA, Lopes A. Immediate loading of "All-on-4" maxillary prostheses using trans-sinus tilted implants without sinus bone grafting: A retrospective study reporting the 3-year outcome. *Eur J Oral Implantol.* 2013;6(3):273-283.
 - Maló P, De Araújo Nobre M, Lopes A, Francischone C, Rigolizzo M. "All-on-4" Immediate-Function Concept for Completely Edentulous Maxillae: A Clinical Report on the Medium (3 Years) and Long-Term (5 Years) Outcomes. *Clin Implant Dent Relat Res.* 2012;14(SUPPL. 1):e139-150. doi:10.1111/j.1708-8208.2011.00395.x
 - Maló P, de Araújo Nobre M, Borges J, Almeida R. Retrievable Metal Ceramic Implant-Supported Fixed Prostheses with Milled Titanium Frameworks and All-Ceramic Crowns: Retrospective Clinical Study with up to 10 Years of Follow-Up. *J Prosthodont.* 2012;21(4). doi:10.1111/j.1532-849X.2011.00824.x



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- Malo P, De Araújo Nobre M, Lopes A, Moss SM, Molina GJ. A longitudinal study of the survival of All-on-4 implants in the mandible with up to 10 years of follow-up. *J Am Dent Assoc*. 2011;142(3). doi:10.14219/jada.archive.2011.0170
- Maló P, Nobre MA, Lopes A. The rehabilitation of completely edentulous maxillae with different degrees of resorption with four or more immediately loaded implants: A 5-year retrospective study and a new classification. *Eur J Oral Implantol*. 2011;4(3):227-243.
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- de Araújo Nobre M, Cintra N, Maló P. Peri-implant maintenance of immediate function implants: a pilot study comparing hyaluronic acid and chlorhexidine. *Int J Dent Hyg*. 2007;5(2). doi:10.1111/j.1601-5037.2007.00239.x
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