
Edward H. ANGLE SOCIETY OF ORTHODONTISTS
MIDWEST COMPONENT



ADMISSIONS PROCEDURE MANUAL

Revised October 2021

Introduction

Dear Doctor,

We are pleased to learn that you have been invited to attend the next annual meeting of the **Midwest Component** of the **Edward H. Angle Society of Orthodontists**. Your attendance at this meeting offers you the opportunity to embark upon admission into the Society.

The path to membership is rigorous but rewarding. The purpose of the Society is to provide a setting for leaders in the field to engage in dialogue and to challenge its members to actively participate and grow intellectually as their orthodontic careers progress.

The Angle Society encourages and maintains a balance between clinical orthodontics and research. To this end, clinical skills are measured during the admission process, but a research project of your choosing is also required. While these requirements may appear daunting on their surface, Society membership is such that you will be aided in your endeavors throughout the entire process. Each and every Angle Society member you will encounter has gone through a similar protocol and you may be sure that they will be willing to help at stations along the way.

The orthodontic cases you offer for evaluation will be examined by the Society's Admissions Committee in an effort not only to gain an understanding of your clinical background, but to initiate a dialogue between you and the Society. You should find the exchange of treatment ideas a valuable learning experience. As you progress through the admission process, you will be encouraged to interact with members of the Society regarding the progress of your cases.

The research project in which you will engage is intended to add to the scientific base of knowledge available to orthodontic clinicians and academicians. The Angle Society's Study Committee is charged with the responsibility of assisting you in bringing worthy ideas before the membership. Your sponsor will guide you through the process as the Study Committee offers advice regarding topic selection, research design, data collection and analysis. This culminates in the presentation of your research project before members of the Society at one of its annual meetings. Every effort will be made to ensure that your admission process into the Edward H. Angle Society of Orthodontists is a rewarding experience and an enjoyable challenge.

Anthony Puntillo, D.D.S., M.S.
Chair, Admissions Committee

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Admissions Protocol

Edward H. Angle Society of Orthodontists

Midwest Component

Your invitation to attend the next annual session of the Angle Society affords you the choice of attending either as a *Guest* or a *Candidate*.

Should you decide to attend as a *Guest*, you have the privilege of participating in all scientific sessions and social events. Guests are free to do nothing more than observe and contemplate the advantages of Society membership. The Midwest Component of the Angle Society is reputed to be an **active, participating** group. You will have ample opportunity to decide whether this is for you. We hope it is. **You may attend only one annual session as a Guest.**

Should you decide to attend as a *Candidate* for membership, you share the same privileges as a Guest, but become directly involved in the Admissions process at the onset. In either case, whether a *Guest* or a *Candidate*, you must accept your sponsor's invitation at least **sixty days** prior to the start of the annual session. Please notify your sponsor of your intent, otherwise you will not be properly listed in the annual meeting directory.

The Guest

You may attend only one meeting as a *Guest*. A *Guest* has no requirements and is invited to attend all scientific sessions and social functions. The next meeting that you attend would be as a *Candidate*.

The Candidate

Initial Meeting

As a Candidate, you are required to display pre-treatment and post-treatment diagnostic records for three cases you have treated. These cases must have been completed, i.e., placed in retention, no more than five (5) years prior to the opening date of the annual session you are attending. It is assumed that you have been the sole provider of orthodontic treatment for these patients, but if you share treatment supervision with another operator, it is your duty to inform the Chairperson of the Admissions Committee of this fact.

As a Candidate, a full-time faculty member can present cases that had treatment provided by residents under his/her supervision. However, during the Affiliate process, only full-time faculty with no intra or extramural practice opportunity and who are Diplomates of the American Board of Orthodontics may present patient records of supervised cases.

The Admissions Committee requires that your study records and diagnostic/treatment reports adhere to the guidelines layout in this manual. All paper, photographic, and radiographic records must be placed in page protectors and submitted in one three-ring binder per case. Pre-treatment, progress and post-treatment cephalometric tracings, including superimpositions, are required. **Digital 3D-printed models will be accepted for Candidate and Affiliate cases provided that they meet the specifications as described on page 27 of this manual.**

You may present cases previously submitted to the ABO, but the five-year time limit mentioned above applies here as well.

The quality of the cases provided for review is intended to be indicative of your acumens and treatment skills. **Bring only your very best work!** Treatment results compromised by the difficulty of a case, while understandable, are not acceptable for admission into the Society. Likewise, cases which would reasonably be judged by your peers as relatively unchallenging will not be accepted. The Admissions Committee is looking for cases of reasonable difficulty that have been finished to the best of your ability. **You must display one case that required the removal of maxillary and mandibular permanent teeth for resolution of the problem and that necessitated space closure biomechanics. Additionally, one case that presented with a significant antero/posterior discrepancy: an ANB a) 6 degrees or greater, or b) -1 degree or more negative (more Class III); or one cases that required clinical skills to manage vertical changes: SN-MP of 36 degrees or greater.** It is expected that occlusion on all cases has been idealized from **second molar to second molar.** This is an opportunity to demonstrate to the membership your level of competence.

At the first meeting you attend, the Candidate will be **interviewed** by members of the Admissions and Study Committees. The Chair of the Admissions Committee will contact you regarding the time and place of your interview. The interview is designed to help acquaint you with those members of the Society who will be evaluating your work, but is also intended to familiarize these individuals with *you* and your philosophy of orthodontic practice. You will be asked about your educational background, your academic experience, what you have found especially rewarding in your practice, what research interests you may have, and what your future goals may be, among other things. The interview is also your first opportunity to ask questions you may have about the Admissions process and about the Angle Society in general.



During the Admission process, it is important that you plan to stay and display your cases until the end of the meeting. The Admissions Committee has a great deal of work to conclude in a short period of time. Affiliates who choose to leave the meeting early jeopardize the process when examiners and members are not allowed ample time to review their cases.

The Second Meeting

By the second meeting, you will be classified as a *First Year Affiliate Member*. As a First Year Affiliate, you are required to place on display pre-treatment diagnostic records for **ten cases of various classifications and degrees of difficulty** (see, Appendix 1 pg. 36 “*Guidelines for Angle Case Selection*”). **The ten cases cannot be started more than four months prior to the meeting.** Starting of a case is defined by the initiation of any type of tooth movement. You **must** follow the case report format as outlined in this manual (pages 12-15). **Failure to follow the format may result in a rejection of your cases. In addition, a completed evaluation form (Appendix 5, page 43) and a Discrepancy Index must be completed and included with each case report.**

A Synopsis of Case Reports is required for case display. **Please place the synopsis in a page protector and display it separately from the three-ring binders.**

The Admissions Committee will select **six** cases out of the ten you have presented for review. Your cases will be evaluated by a team of evaluators. Your team of evaluators, made up of two members of the Admissions Committee, will discuss these cases with you and ask for your input where indicated. You will then be required to bring all progress study records with you for each of these six cases to subsequent meetings **until treatment has been completed and all your cases have been accepted.**

The ten cases that you display must follow the Guidelines for Case Selection found in Appendix

1. Approval from the Admissions Committee Chairperson is required for any substitution.

At the second meeting, you must submit evidence of completion of (or application for) Written Examination of the American Board of Orthodontics. Finally, you will meet with the Study Committee regarding ideas you may have been contemplating for your research project. The Study Committee will help you evaluate your proposal to make sure it will meet the criteria for a paper which is acceptable for membership (see *Appendix 3*). The committee will also help with ideas for a project, should this need arise. It is strongly encouraged that you establish a timeline for your research presentation. Without a personal timeline, you will be unable to present your paper as a Third Year Prospective Affiliate which is expected.

The second meeting provides you with an excellent opportunity to get together with your team of Admissions Committee evaluators and Study Committee members. Take advantage of this.

The Third Meeting

By the time of the third meeting, you will be a *Second Year Affiliate Member*. At this time, you are required to present *progress* study records on each of your six cases. Please refer to *pages 16-18 and Appendix 6* for a sample of the required progress report since that format differs from the initial report format. **These records may not be recorded more than two months prior to the starting date of the third meeting.** Again, you are required to obtain records on all ten cases, but submit for review only the six cases selected at the previous meeting.

You are further required to submit to the Study Committee a brief *written* summary of an anticipated protocol for your **research project**. A meeting with the Study Committee in this regard will be arranged for you.

The Fourth Meeting

At this meeting, you have become classified a *Third Year Affiliate Member*. You are required to present *post-treatment* study records for those cases which have been placed into retention and *all progress* study records for those cases not yet completed. Please refer to *Page 19-21 and Appendix 7* for samples of required final reports since the format differs from the initial and progress reports. **An ABO Cast-Radiograph Evaluation should also be included in the final report** (https://americanboardortho.com/media/1212/case_report_work_file.pdf). Should it become necessary to substitute one of your alternate cases for an originally selected case, prior approval must be obtained from the Admissions Committee Chairperson.

Your research project, if completed, may be presented at this meeting. It will be necessary for you to be in touch with the Program Chairman **by September 1st** prior to the meeting to enable reservation of a speaking time for you. If your project is still underway, a **progress report** must be submitted to the Study Committee. Please see *Appendix 2 & 4* for names, addresses, and phone numbers of current members of the Admissions and Study Committees.



This is the first meeting at which all requirements for Admissions to the Society may be completed.

The Fifth Meeting

At this meeting, you become a *Fourth Year Affiliate Member*. You are required to present for review all six cases (including those already accepted) until all cases are completed.

Your research project should be finished by now and a paper prepared for presentation before the general membership. It will be necessary for you to be in touch with the Program Chairman by September 1st prior to the meeting to enable reservation of a speaking time for you. Your research project must be completed no later than one year after all cases have been completed.

If special circumstances prevent you from attending a meeting, at any time after your First- Year Affiliate meeting, you must make arrangements with your sponsor for your case records to be shipped to the meeting site and displayed for review. Those cases will be reviewed by your examiners and the completed evaluation worksheets will be provided to you. If necessary, your examiners will communicate their thoughts to you either by phone or email. If you miss two consecutive years during the admission process, your admission process may be terminated.

Special At-Large Membership

Edward H. Angle Society of Orthodontists

Midwest Component

Purpose: To create a membership classification that will enable the members of the Midwest Component of the Edward H. Angle Society of Orthodontists to invite select individuals to membership who previously have made outstanding contributions to our specialty and who have received their orthodontic education outside the United States and Canada. They should possess outstanding credentials, including excellence in clinical orthodontics, and should be able to contribute substantially to the intellectual environment of our Society.

Criteria: Guidelines for selection may include, but are not limited to the following:

1. The candidate must have completed an accredited full-time graduate program or residency program in the specialty of orthodontics of at least two years in duration. The suitability of the candidate's education will be determined by the Board of Directors of the Midwest Component.
2. The candidate should be affiliated with a teaching or research institution or have equivalent experience (e.g., lecturing at national or international meetings).
3. The candidate should have shown evidence of a history of scholarly activity that may include publication in a respected journal (e.g., Angle Orthodontist, American Journal of Orthodontics and Dentofacial Orthopedics, European Journal of Orthodontics) or equivalent.

Sponsorship: The candidate's sponsor should have known the candidate for a period of time, be fairly certain of his or her character, and be able to vouch for the candidate's ability to communicate in English. The candidate should assure the sponsor of his or her ability and willingness to attend all annual meetings of the Angle Society during the admissions process as well as during regular meetings.

Procedure: The sponsor will provide by September 15th prior to the next annual meeting, the following documents:

1. A letter of sponsorship
2. The curriculum vitae of the candidate
3. An additional letter of recommendation from a well-known orthodontist from the candidate's country or region
4. Verification of the candidate's education (including a copy of an official certificate of completion of an accredited orthodontic graduate program)

The preceding material should be sent to the Society's Secretary. The Secretary will share the material with the Special At-Large Membership Committee. If this committee feels the candidate merits consideration, they will send their recommendation to the Board. The Board then will make the final decision as to the candidacy of the individual.

The prospective Special At-Large candidate must attend one annual meeting as a guest. UNDER NO CIRCUMSTANCES should the sponsor bring the individual to our meeting as a candidate until his or her special status has been approved by the Board of Directors.

Summary of Requirements

A summary of requirements for Admissions into the Midwest Component of the Edward H. Angle Society of Orthodontists is as follows:

First Meeting: Prepare and display **three** treated cases taken from your private practice which have been completed in the last five years prior to the meeting date. Follow the guidelines for these three cases defined on pages 5-6 of the manual. This is required of Candidates, not Guests.

Second Meeting: Meet with the Admissions and Study Committees. Submit evidence of completion of or application for Written Examination of the ABO. Bring ten pre-treatment cases (that meet the Case Selection Criteria found in Appendix 1) of which six will be selected for treatment.

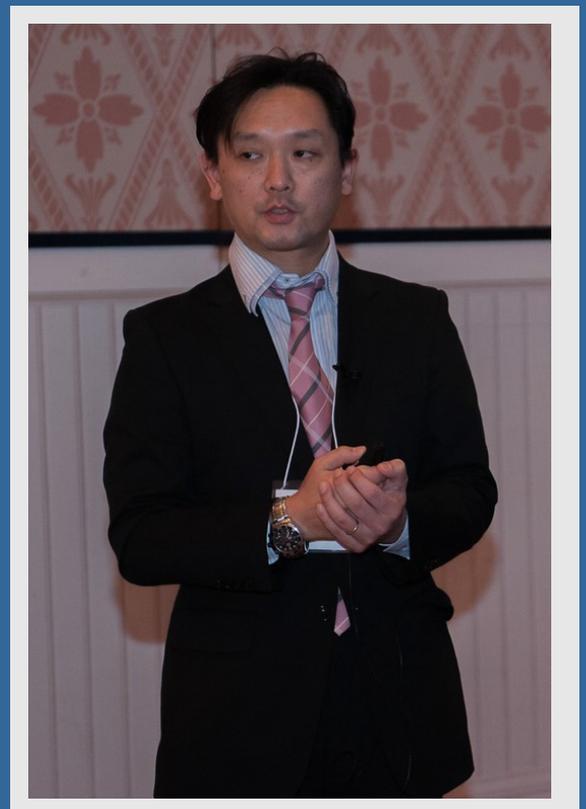
Third Meeting: Bring initial records, progress records and Progress Case Reports for the six selected cases. Submit a written description of your anticipated research project to the Study Committee.

Fourth Meeting: Bring all initial, progress and post-treatment study records for all of your six selected cases. Present your research paper or provide a written summary of progress to the Study Committee.

Fifth Meeting: Bring all initial, progress and post-treatment study records for all of your six selected cases. Present your research paper before the general membership if not done so at the previous meeting.

The affiliate member planning to present their paper at the annual meeting must contact the Program Chairman by September 1st prior to the meeting so that a time can be reserved for their presentation.

Prior to completion of all requirements, you must provide evidence of successful completion of the ABO written examination.



SYNOPSIS OF CASE REPORTS

Case Report Format (For your use, this synopsis form is included as a separate file at http://www.anglemidwest.org/uploads/5/6/3/5/56356009/synopsis_of_case_reports.2019_by_lima.pdf)

Synopsis of Case Reports (case selection **must** meet the criteria in Appendix 1). **This form should be included and displayed until all cases are completed.**

Name & Classification	Treatment Summary	Age & Date of Pre-Tx Records	Age & Date of Progress Records	Age & Date of Post-Tx Records				
1. John Smith Class I	Extract <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>4</td><td>4</td></tr><tr><td>4</td><td>4</td></tr></table>	4	4	4	4	10 yrs. 9 mos. 09-22-96	11 yrs. 7 mos. 10-27-97	12 yrs. 7 mos. 07-20-98
4	4							
4	4							
2. Mary Jones Class II Div 1	Non-extraction	10 yrs. 2 mos. 11-12-96	11 yrs. 4 mos. 01-04-98					
3. James Hagerty Class II Div 2	Non-extraction	12 yrs. 2 mos. 09-09-96	13 yrs. 2 mos. 09-18-97					
4. Jenny Jackson Class II Div 1	Extract <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>4</td><td>4</td></tr><tr><td>5</td><td>5</td></tr></table>	4	4	5	5	10 yrs. 4 mos. 10-15-96	11 yrs. 5 mos. 11-12-97	12 yrs. 7 mos. 01-05-99
4	4							
5	5							
5. Marcy Geise Class III	Non-extraction with surgery	14 yrs. 6 mos. 12-15-96	15 yrs. 2 mos. 08-19-97					
6. Jeremy Tracy Class I	Extract <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>5</td><td>5</td></tr><tr><td>5</td><td>5</td></tr></table>	5	5	5	5	13 yrs. 5 mos. 11-12-96	14 yrs. 5 mos. 11-14-97	15 yrs. 7 mos. 01-10-98
5	5							
5	5							
7. Michael Albert Class I posterior crossbite	Non-extract RPE	11 yrs. 1 mos. 12-02-96	12 yrs. 4 mos. 03-06-97	13 yrs. 2 mos. 01-25-99				
8. Jeff Allen Class II Div 1 posterior cross- bite	Non-extract RPE	13 yrs. 0 mos. 05-17-96	14 yrs. 4 mos. 09-12-97					
9. Marcia Croal Class I	Extract <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>4</td><td>4</td></tr><tr><td>4</td><td>4</td></tr></table>	4	4	4	4	12 yrs. 8 mos. 07-08-96	13 yrs. 4 mos. 03-23-97	
4	4							
4	4							
10. Rustly Rhodes Class III	Non-extraction Reverse-pull	10 yrs. 1 mos. 04-17-96	11 yrs. 4 mos. 07-01-97					



Edward H. Angle Society

Midwest Component

Case Report

Presented by:

Angle Midwest Case Report Initial Records

Patient's Name:

Date of Birth (mm/dd/yyyy): Age (yrs. mos.):

History and Etiology 510 max.

Pretreatment Records Date (mm/dd/yyyy):

Diagnosis

Skeletal 510 max.

Dental 510 max.

Facial 510 max.

Specific Objectives of Treatment

Maxilla (Transverse, A-P, Vertical) 510 max.

Mandible (Transverse, A-P, Vertical) 510max.

Maxillary Dentition

A-P 98 max. each

Molars

Incisors

Vertical 98 max. each

Molars

Incisors

Transverse 98 max. each

Intermolar width

Inter canine width

Buccolingual inclination

Mandibular Dentition

A-P 98 max. each

Molars

Incisors

Vertical 98 max. each

Molars

Incisors

Transverse 98 max. each

Intermolar width

Inter canine width

Buccolingual inclination

Facial Esthetics 510 max.

Treatment Plan 1170 max.

Type of Appliance (include bracket slot size and prescription)

THE PROGRESS CASE REPORT

Angle Midwest Case Report Progress Records

Results Achieved

Date of Records (mm/dd/yyyy)

Patient Age (yrs. mos.)

Treatment time (months)

Maxilla (Transverse, A-P, Vertical) 510 max.

Mandible (Transverse, A-P, Vertical) 510 max,

Maxillary Dentition

Alignment (marginal ridges, rotations, torque/tip, symmetry) 510 max

A-P 98 max.

Molars

Incisors

Vertical 98 max

Molars

Incisors

Transverse 98 max.

Intermolar width

Inter canine width

Buccolingual inclination

Mandibular Dentition

Alignment (marginal ridges, rotations, torque/tip, symmetry) **510 max**

A-P 98 max.

Molars

Incisors

Vertical 98 max

Molars

Incisors

Transverse 98 max.

Intermolar width

Inter canine width

Buccolingual inclination

Facial Esthetics 510max.

Future Treatment Concerns and Summary 1170 max.

A large, empty rounded rectangular box with a thin black border, intended for the user to write their response to the section header. The box is horizontally oriented and occupies most of the width of the page.

THE FINAL CASE REPORT

Angle Midwest Case Report Final Records

Results Achieved

Date of Records (mm/dd/yyyy)

Patient Age (yrs. mos.)

Treatment time (months)

Maxilla (Transverse, A-P, Vertical) 510 max.

Mandible (Transverse, A-P, Vertical) 510 max,

Maxillary Dentition

Alignment (marginal ridges, rotations, torque/tip, symmetry) 510

A-P 98 max.

Molars

Incisors

Vertical 98 max

Molars

Incisors

Transverse 98 max.

Intermolar width

Inter canine width

Buccolingual inclination

Mandibular Dentition

Alignment (marginal ridges, rotations, torque/tip, symmetry) **510 max.**

A-P 98 max.

Molars

Incisors

Vertical 98 max

Molars

Incisors

Transverse 98 max.

Intermolar width

Inter canine width

Buccolingual inclination

Facial Esthetics 510 max.

Superimpositions 510 max.

Retention 510 max

Final Evaluation of Treatment and Prognosis 920 max

DIAGNOSTIC STUDY RECORDS

The importance of quality study records cannot be overestimated. By implication, they set the standard for the level of treatment to follow. The following records are required for your cases:

PRE-TREATMENT RECORDS

- Stone models or 3D-printed models
- FMX or panoramic radiographs
- Cephalometric radiograph
- Cephalometric tracing
- Facial photographs: profile with lips in repose, frontal with lips in repose, and frontal smiling
- Intra-oral photographs: frontal, right lateral, left lateral, maxillary occlusal, mandibular occlusal
- Summary of cephalometric measurements
- http://www.anglemidwest.org/uploads/5/6/3/5/56356009/2020_discrepancy_index_file.pdf

PROGRESS RECORDS

*These records may not be recorded more than two months prior to the starting date of the third meeting

- Stone models or 3D-printed models
- FMX or panoramic radiographs
- Cephalometric radiograph
- Cephalometric tracing along with serial composite superimpositions
- Facial photographs: profile with lips in repose, frontal with lips in repose, and frontal smiling
- Intra-oral photographs: frontal, right lateral, left lateral, maxillary occlusal, mandibular occlusal
- Summary of cephalometric measurements

POST-TREATMENT RECORDS

- Stone models or 3-D printed models
- FMX or panoramic radiographs
- Cephalometric radiograph
- Cephalometric tracing
- Facial photographs: profile with lips in repose, frontal with lips in repose, and frontal smiling
- Intra-oral photographs: frontal, right lateral, left lateral, maxillary occlusal, mandibular occlusal
- Summary of cephalometric measurements
- [Cast Radiograph Evaluation](#)

http://www.anglemidwest.org/uploads/5/6/3/5/56356009/2020_cre_file.pdf

Cast Trimming Requirements

Impressions should extend far enough into the sulcus to allow accurate reproduction of all soft tissue anatomy in the dental casts. Impressions are to include the most distal tooth in each quadrant with an adequate replication of the tuberosity. The casts must be trimmed so that when placed in occlusion and resting on their backs on the table top, they replicate the patient's occlusion with condyles seated in the fossae. Page 25 illustrates trimming requirement. If your dental casts are mounted on adjustable articulators, they must be converted to hand-held models. In addition, to the hand-held models, you may also display your original mounted casts if so desired. It is strongly encouraged that magnetic mounting plates be utilized.

When trimming the posterior portion of the maxillary cast, be careful to preserve the tuberosity when possible, and certainly the second molars. Likewise, preserve a reasonable portion of the retromolar area when trimming the mandibular cast. Partially trimmed off second molars is not acceptable. Trimming or carving on the anatomical portion of the dental casts should be limited to the removal of bubbles and other defects. During cast finishing, take care to avoid obliteration of soft and hard tissue anatomy.

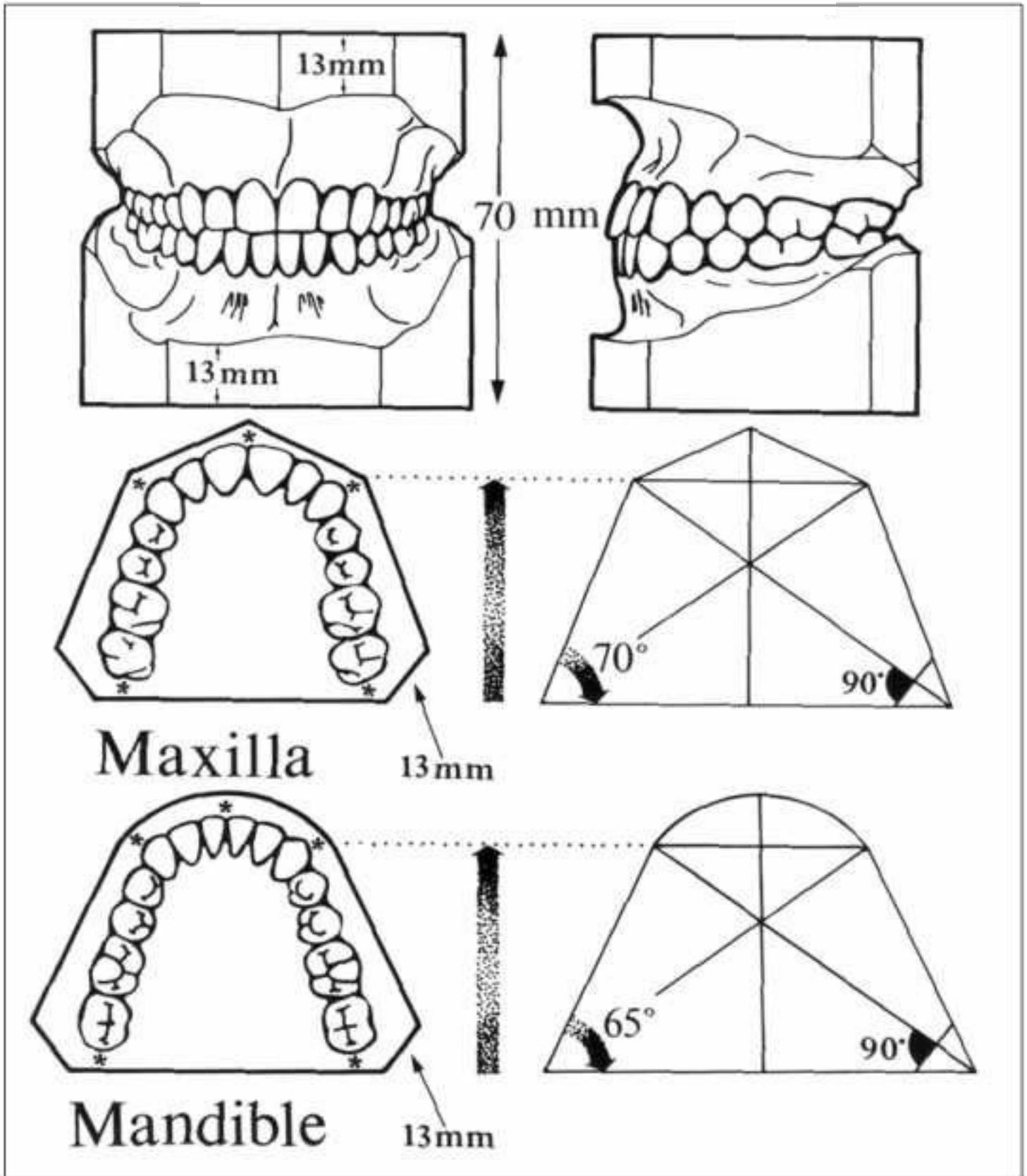
3D- printed models for Candidate, First Year Affiliate, Affiliate progress models, and Affiliate final models are acceptable provided that the models are printed with solid ABO bases and at a layer thickness no greater than 30 microns. Furthermore, the scan or the impression used to create the model should include a full representation of the palatal tissues and a minimum of 5mm of gingival detail on both the facial and lingual surfaces of all teeth. Finally, all printed models should be produced with a material that is appropriately colored (preferably peach) to allow for sufficient contrast to enable a detailed analysis of the tooth/bracket position and alignment. All Affiliate final models should still be provided in the traditional plaster form.

SUPPLEMENTAL INFORMATION FOR CASE REPORTS

All diagnostic records are to be of standards that would be satisfactory for presentation to the American Board of Orthodontics. All models, photos, x-rays and cephalometric tracings are to be labeled with the following information:

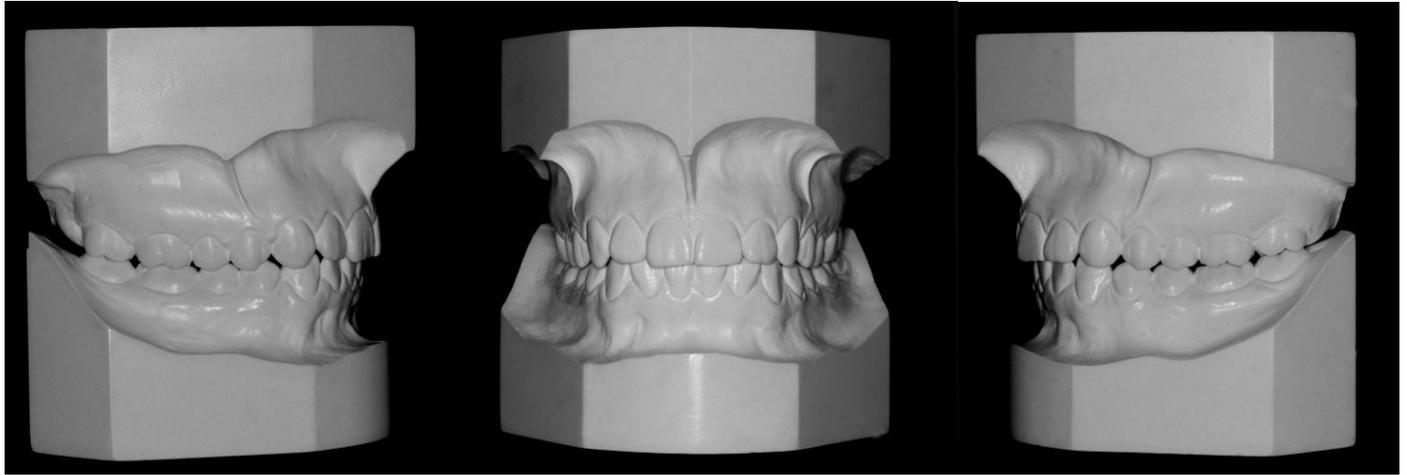
- a. Affiliate name
- b. Casenumber
- c. Date Records were taken
- d. Age of Patient
- e. Colored dot for quick reference: initial (**black**), progress (**blue**), progress2 (**green**) or final (**red**) records
- f. To be in compliance with HIPPA standards, all displayed case reports must have a signed copy of a permission form in the pocket at the back of the patient binder. An example of a permission form is available in *Appendix 8*.

DENTAL CASTS GUIDE

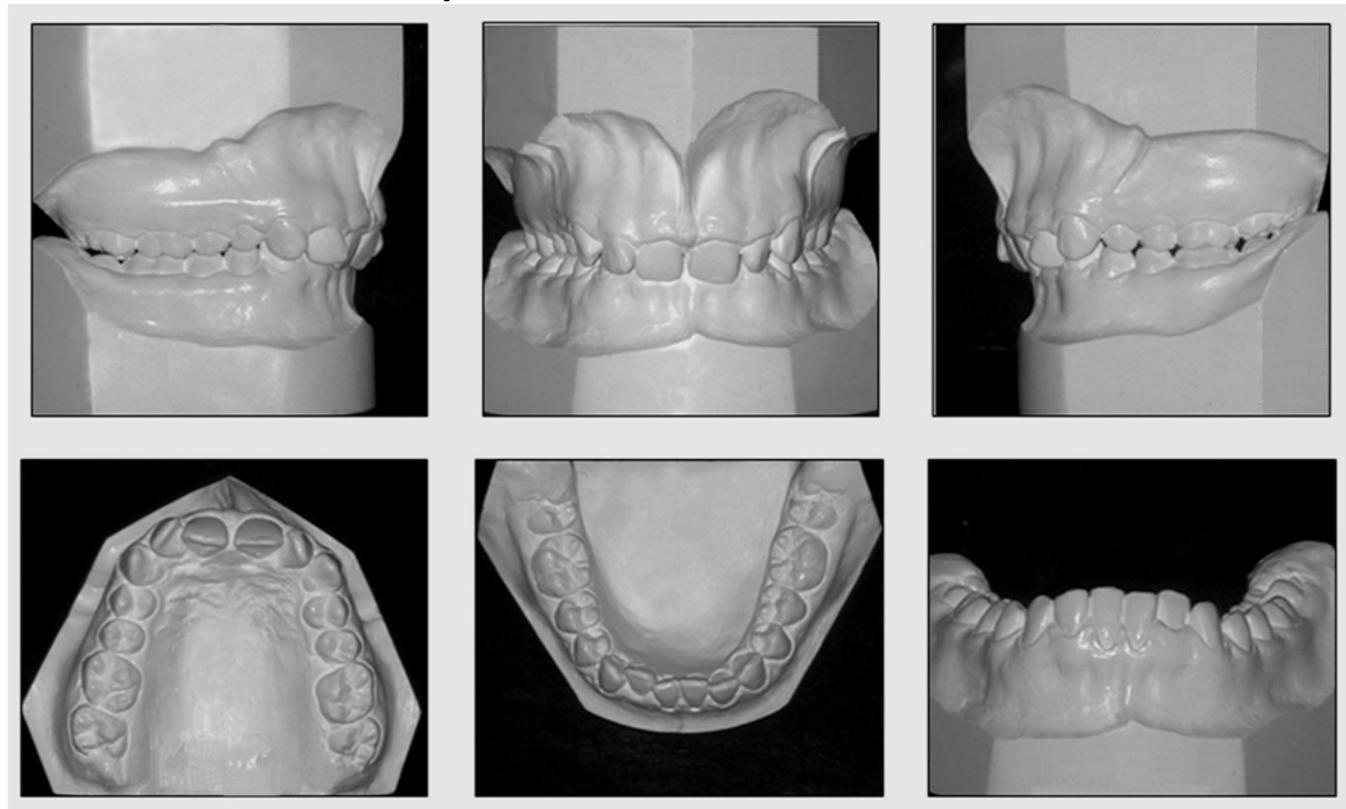


REQUIREMENTS FOR DENTAL CASTS

Impressions should extend far enough to allow accurate reproduction of all soft tissue anatomy in the study models. The models should be trimmed in maximum intercuspation. Documentation of significant difference between centric occlusion and centric relation should be provided, a bite registration is preferred. Trimming or carving on the anatomical portion of the study models should be limited to the removal of bubbles and defects.



After the models are prepared, they should be smoothed or polished in such a manner that tooth and soft tissue detail is not destroyed.



REQUIREMENTS FOR 3D-Printed Models

Prior to selecting an orthodontic laboratory to print your models, inquire as to the resolution capabilities of the 3D printer used to print the stereolithographic models in the X, Y, and Z coordinates. Some orthodontic laboratories offer various modes of printing stereolithographic models. For example, “high-quality” versus “high-speed” are terms used to describe resolutions of printing. A high-quality model can be printed at approximately 16 microns (16 μ or 0.016 mm). Conversely, the printing mode producing a model printed at a higher speed (but lesser quality) will likely be printed at approximately 30 microns (30 μ or 0.030 mm).

The printing mode producing a higher quality model should be chosen, and the printing mode producing a lesser quality model should be avoided. Models resulting in lower quality will not be acceptable for the clinical examination. Orthodontic laboratories specializing in 3D stereolithography (SLA) may prove to be necessary in order to obtain a higher quality 3D-printed stereolithographic model for submission.

Materials

Within the 3D printer marketplace, many resins, polymers, powders, pellets, dusts, metals, and filaments are used as the composite material for printing with 3D printers. The material used to print the 3D-printed stereolithographic models must be non-toxic and comprised of a non-Volatile Organic Carbon (VOC) material.

For 3D-printed stereolithographic models, the models should be printed with a non-translucent / non-transparent material (e.g., a plastic polymer) that, when fully cured (e.g., by UV light or otherwise), is of a limited color palette (see ‘Color’). The resulting model should not possess significant reflective qualities nor be highly glossy in appearance.

Color

The resulting color of the 3D-printed model must be of a limited color palette in order to provide the best representation for observation of anatomical detail. Off-white, cream, beige, or peach colors are acceptable for submission.

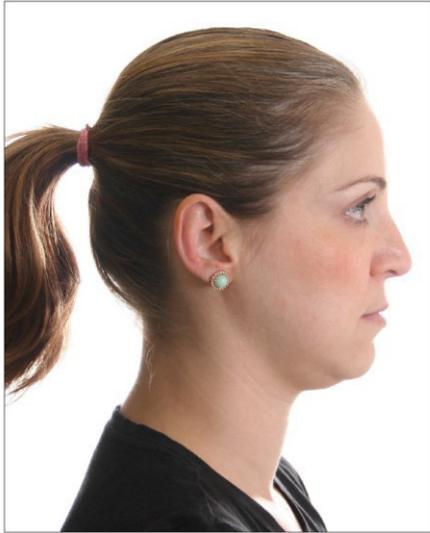
Other colors, such as standard white, bright white, or any variation of “milky” white are not acceptable for submission due to the reflective properties of these colors. Stereolithographic models with these color attributes will not be accepted for submission.

Anatomical Accuracy Assessment

Upon receipt of your 3D-printed stereolithographic model(s) from the orthodontic laboratory and prior to submitting the model(s) for your clinical examination:

1. Ensure each model has bases trimmed to ABO specifications (see Dental Cast Guidelines for additional guidance on trimming bases to ABO specifications).
2. Verify the model’s occlusion by consulting the corresponding patient’s intra-oral photographs, back to the second molar.
3. Visually inspect and assess the model for anatomical accuracy by measuring the intramolar width, as well as that of the central incisors.

PHOTOGRAPHS



Facial Photos are to be approximately one-fourth life size. They should be printed in color. If recorded digitally, the photos must be printed at photographic resolution. Arranged single mounted prints or photo composites are permitted. Digitally printed composites must be printed on **photo quality inkjet paper** at minimum.

The patient is to pose with lips at rest or lightly contacting in frontal and profile views. The patient is oriented in Frankfort Horizontal; the patient is to assume natural head position; the eyes are open; eye glasses and jewelry are removed; all hair is arranged behind the ears. The background should be light-toned and without discernible pattern.

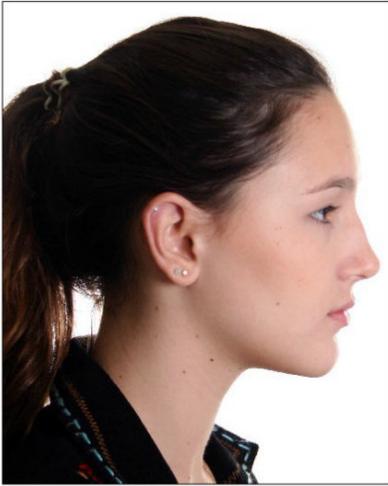


Intra-oral photos are to be in color and must fulfill the same *print* requirements as facial photos. Frontal and right and left lateral views are required. Occlusal views are highly recommended. The photographic prints must depict the patient's teeth as nearly 1:1 with the actual tooth size as possible.

The patient's occlusal plane must be level in all photos. Minimize distractions such as shadows, insufficient depth of field, lip retractors, and hygiene issues.

PHOTOGRAPHS

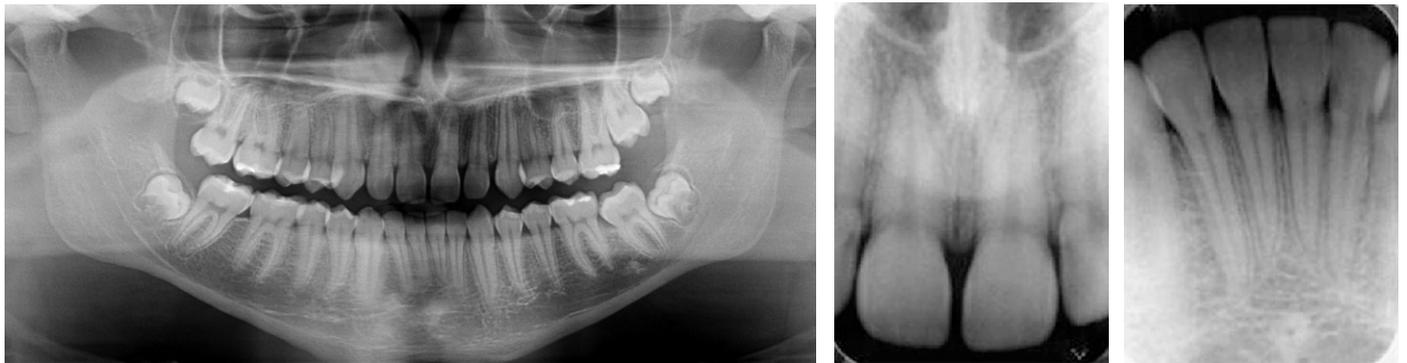
This is the layout of three facials and five intra-orals.



RADIOGRAPHIC RECORDS

Full Mouth or Panoramic Radiographs

Periapical and panoramic radiographs must be of diagnostic value. The films must be arranged in proper sequence and marked clearly regarding orientation (left and right). The radiographs must be placed in transparent sheet protectors. Digital radiographs printed on photo quality inkjet paper are acceptable. If conventional radiography is utilized, then original radiographs are to be used in the report.



Cephalometric Radiographs

Cephalometric radiographs must show as much anatomy as possible, especially in vital landmark areas. They should be properly standardized, oriented, and processed. The soft tissue profiles should be easily discernible with or without enhancement.

Cephalometric radiographs should be placed in transparent sheet protectors. Digital and/or scanned radiographs must follow the guidelines as outlined above. It is your responsibility that the magnification factor between cephalometric radiographs is consistent.



Cephalometric Tracings

Cephalometric radiographs *should be accurately traced either manually on acetate film or with a computer program and printed on clear transparent plastic. Printed tracings and superimpositions must be printed in a 1:1 ratio.* Templates may be used for tracing of teeth. Do not record measurements on the cephalometric acetate tracing. All measurements used must be recorded on the Cephalometric Summary sheet (*page 32*). Record Frankfort Horizontal from anatomic Porion. Soft tissue outlines must be included on the tracings. The tracings should be placed in transparent sheet protectors and displayed in the pocket at the back of the patient binder. Pre-treatment tracings (**black**), progress tracings (**blue**), second progress tracings (**green**) and post-treatment tracings (**red**)-see bottom of page 33.

Besides all the measurements that are on the Cephalometric Summary Sheet (*page 32*), you may also use your customary landmarks, lines, and measurements provided valid standards are available. Any additional cephalometric measurements that are in addition to those on the Cephalometric Summary Sheet must be recorded on a supplemental sheet.

Edward H. Angle Society Case Report

CEPHALOMETRIC SUMMARY

AREA	MEASUREMENT	A ¹	A ² - prog	B	*DIFFERENCE A ¹ - B
Maxilla to Cranial Base	SNA				
Mandible to Cranial Base	SNB SN-Go-Gn FMA				
Maxillo- Mandibular	ANB				
Maxillary Dentition	1 to NA (mm) 1 to SN 6-6 (mm)(casts)				
Mandibular Dentition	1 to NB (mm) 1 to MP 6-6 (mm)(casts) 3-3 (mm)(casts)				
Soft Tissue	Esthetic Plane Upper Lip Lower Lip				

For your use, this form is included as a separate file at

http://www.anglemidwest.org/uploads/5/6/3/5/56356009/2020_ceph_summary_.pdf

A1 - Pre-treatment records

A2 - Interim or progress records if indicated

B - Post-treatment records

*** NOTE: Difference between A1 and B.** It is not required for Affiliates to use negative or positive signs to indicate this value. Show only the number difference between the two values. **Additional measurements may be used for evaluation. Please place these on additional sheet.**

COMPOSITE TRACINGS

Three composite tracings are required:

- *Craniofacial*

- *Maxillary*

- *Mandibular*

The three composites are required for each case. Pre-treatment tracings are black, progress tracings are blue or green, and post-treatment tracings are red. Beginning in 2017, superimpositions will be completed as required by the American Board of Orthodontics (ABO). The link for instructions is on the ABO website at: <https://www.americanboardortho.com/orthodontic-professionals/about-board-certification/clinical-examination/certification-renewal-examinations/mail-in-cre-submission-procedure/case-report-examination/case-record-preparation/superimpositions/>

The following procedure for composite tracings is required:

* Craniofacial Composite - register on Sella with the best fit on the anterior cranial base bony structures, e.g., Planum Sphenoidum, Cribriform Plate, Greater Wing of the Sphenoid, to assess overall growth and treatment changes.

* Maxillary Composite - register on the lingual curvature of the palate and the best fit on the maxillary bone structures to assess maxillary tooth movement.

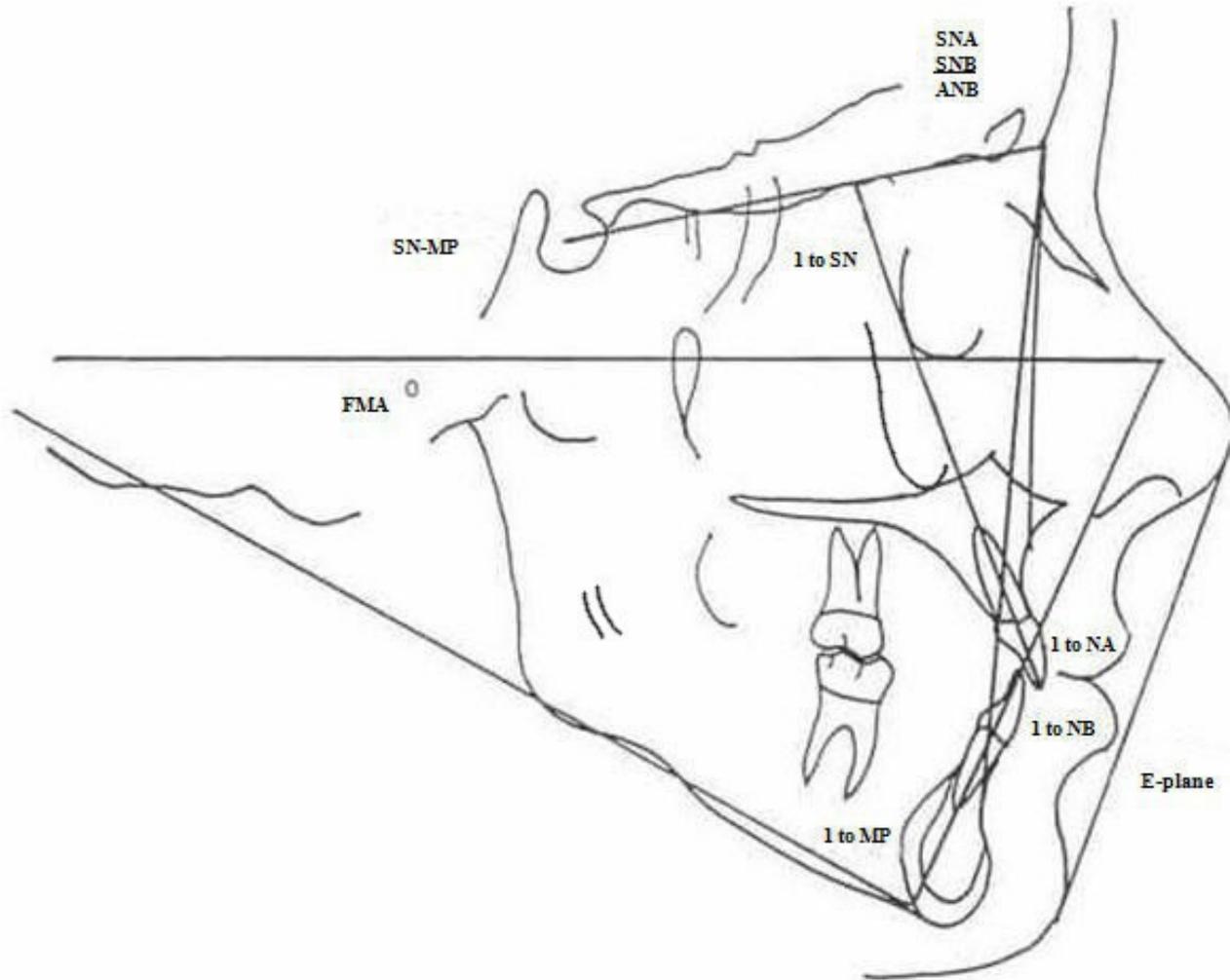
* Mandibular Composite - register on the internal cortical outline of the symphysis with the best fit on the mandibular canal to assess mandibular tooth movement and incremental growth of the mandible

***Superimpositions should be completed as follows:**

- Initial (#1- Black) to First Progress (#2- Blue)
- First Progress (#2- Blue) to Second Progress (#3- Green) / [if treatment is not complete in 3rd year]
- First Progress (#2- Blue) to Final (#4- Red) / [If treatment is complete in 3rd year]
- Second Progress (#3- Green) to Final (#4- Red) / [treatment complete in 4th year]
- Initial (#1- Black) - Final (#4- Red)

EXAMPLES OF TRACINGS

Cephalometric Tracing

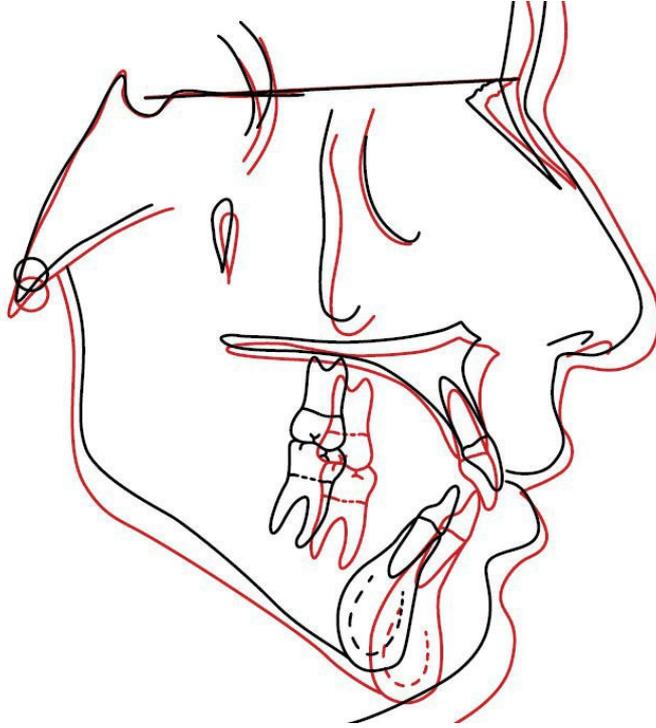


Note: These tracings are for illustration purposes only. Your tracings will be life size and therefore each tracing will fill the page.

COMPOSITE TRACINGS

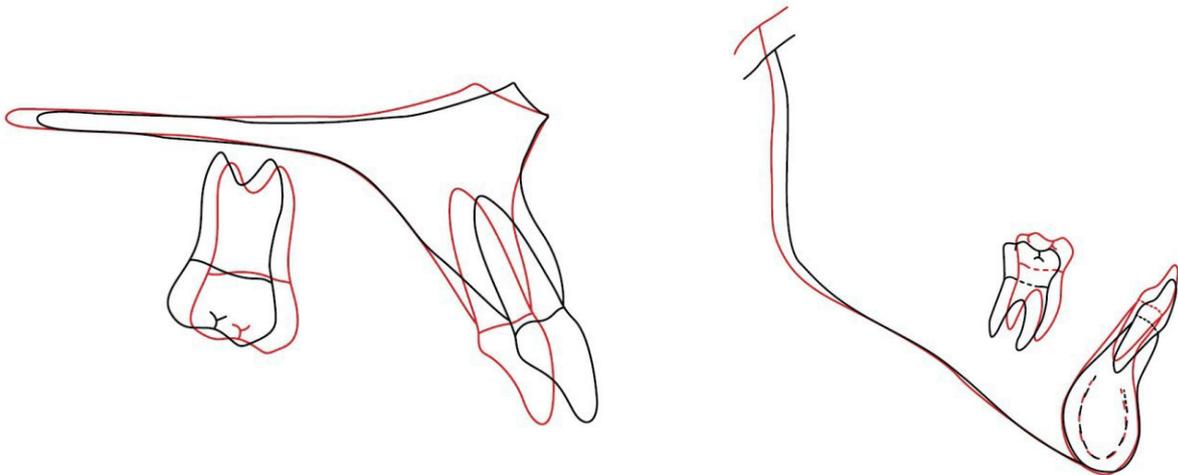
Craniofacial Composite

John Doe
— 04-10-96
— 04-18-98



Maxillary and Mandibular Composites

John Doe
— 04-10-96
— 04-18-98



The clinical requirement of the Admissions process requires the *First Year Affiliate* to bring a total of 10 cases with complete clinical diagnostic records. These cases permit the Admissions Committee to evaluate clinical proficiency in a variety of areas. These cases should demonstrate differing malocclusion types. These must include cases from the following areas:

1. Two cases that require the removal of maxillary and mandibular permanent teeth for resolution of the problem and that necessitate space closure biomechanics
2. Two cases that present with a significant antero/posterior discrepancy: an ANB a) 6 degrees or greater, or b) -1 degree or more negative (more Class III)
3. Two cases that require clinical skills to manage vertical changes: SN-MP of 36 degrees or greater
4. Of the 10 cases, the following limitations apply:
 - a. No more than two cases being treated in a two-phase treatment modality
 - b. No more than one case requiring orthognathic surgery

If there are any questions regarding these requirements, please contact the Chairperson of the Admissions Committee. To identify the Chairperson refer to Appendix 2 or contact your sponsor. Good luck and thank you!

Edward H. Angle Society of Orthodontists

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Affiliate Research Proposal and Protocol Guidelines

The Study Committee plays an advisory role in the research component of the requirements for membership to Angle Midwest. As an Affiliate member, you will be required to attend the Affiliate/Study Committee meeting held on the first day of each meeting (traditionally Saturday morning at 11:00 a.m.). This meeting is dedicated time with the entire Study Committee to guide you in choosing, planning, conducting, writing, and presenting a research project. The following steps outline your goals and provide suggestions for this process and reflect the expected timeline for completing your research. Completing these steps more quickly than outlined is certainly encouraged.

Step 1: Select a Research Topic, Research Advisor(s) and a Statistician

1. As a **First Year Affiliate** talk with your **Sponsor(s) and the Study Committee** to generate a list of potential topics for your research project and potential research advisor(s). At a minimum, one member of the Study Committee will be assigned to help you and to monitor your progress. Staying in touch with the Study Committee will be the responsibility of the Affiliate.
2. Consider different types of research involvement available to you:
 - a. Being part of a basic science research project, or a clinical research project conducted in a University/Hospital setting
 - a. Conducting a clinical research study in your practice
 - b. Conducting a survey to answer a clinical or practice management question
3. Talk with potential research advisors and discuss potential research topics.
4. If you will consider conducting a project on your own, is there a problem or research question that interests you and has not been adequately addressed in the literature? Can your question (hypothesis) to address the problem be reasonably answered in the time available to complete the project?
5. If your research question is not part of an ongoing project, you will need to search the research literature to determine what is known about your subject(s). The use of a reference manager software is recommended, but not required (e.g., EndNote and Reference Manager are not free, but may be so through a University affiliation; Mendeley is free). The Study Committee chair can help you with this software and explain its use in preparing a literature database, research proposal, and your paper to turn into the Study Committee the same year you present your study at the meeting to fulfill this requirement.

Step 2: Submit a written Research Proposal between the First and Second Year Affiliate Meetings

1. In consultation with your advisors, select a topic that interests you and submit to the Study Committee a **Research Proposal** when you are a **Second Year Affiliate**. This should consist of one or two paragraphs outlining the proposed subject and title, who are you working with on the project, and the statistical analysis you intend to use. Our requirement is that you **submit this proposal prior to your Second Year Affiliate meeting**, so that it may be discussed at the annual Affiliate/Study Committee meeting.

Step 3: Preparation of the Research Protocol between the Second and Third Year Affiliate Meetings

1. Write out what you are going to look at and why. Then list the specific questions you want to ask. These will be your specific aims. These should be in the form of questions

that can be answered yes or no, depending on the outcome of your study.

2. Your Research Protocol must include the amount of data you need to collect (e.g., number of subjects, number of brackets, number of measurements) which is termed **the statistical power of study sample**. You must consult with the individual who will perform the statistical analysis and present to him/her a clear plan on what questions (hypotheses) will be tested and how they will be tested (statistical test or analysis) to determine study sample statistical power BEFORE you write your Research Protocol. If you do not, your Protocol will be returned to you unapproved. There is a possibility that even if the answer is yes, or is no, that it is the wrong conclusion. Type I and type II statistical errors address this concern, and will be part of what the person you will work with to do the statistical analysis will consider.
3. Strictly speaking, Institutional Review Board (IRB) approval of research protocols is mandated prior to the initiation of research projects involving humans, regardless of it being retrospective or prospective, even if it only involved archived material. The Angle Midwest Study Committee has taken the stance that obtaining IRB approval will be on a case by case basis for the projects undertaken by its Affiliates as a part of their membership requirements.

It should be noted that: 1) Someone who is a full or part-time faculty member may be in breach of compliance requirements of their University if they assist you in any way with your project that allows them to see materials or data that may identify the individual from which it originates; many journals and research meetings now require that an IRB approval be in place for a submission. This includes the American Journal of Orthodontics and Dentofacial Orthopedics, but at this time does not include the Angle Orthodontist.

If you are a full or part-time faculty member, then you should obtain IRB approval for your study through your University. You will also likely be required to take a human research subject protection course through the University. If you are not a full or part-time faculty member, then you are not required to obtain IRB approval, but you must be responsible for any consequences involving privacy and human subjects' protection.

Step 4: Your Research Protocol – due prior to the Third Year Affiliate Meeting

1. This protocol should be **no longer than ten double-spaced pages** (excluding your timeline and citations) and should include the following:
 - a. The **Title** of your proposed project
 - b. List the name of your **Sponsor, Research Advisor(s), and designated Study Committee Liaison**
 - c. A **Significance** section, including:
 - i. a concise **statement of the purpose** and/or **hypothesis**
 - ii. a description of the **importance** of the study
 - iii. the **novelty** of the study
 - d. The **specific aims** of the project
 - e. **Background** and its significance to the **specific aims**
 - f. **Study design** and **methods**
 - g. A summary of the **statistical methods** you will be using and in most cases a **power analysis**

- h. Provide a **timetable** for the study. Specify the dates and/or start and stop dates for the following:
 - i. data collection
 - ii. data analysis
 - iii. preparation of the Membership Requirement Paper
 - iv. **year** of anticipated Research Presentation and Submission of your Membership Requirement Paper to the Study Committee
 - v. A selected **bibliography** to support your proposal

Step 5: Submission of the final draft must be sent to the Study Committee Chair and Secretary by September 1st for approval if the affiliate plans on presenting at the following year's meeting.

Step 6: Submission of abstract sent to the program chair by September 1.

Affiliate timeline for Study Committee requirements for membership	
Meeting sequence	Requirements/actions toward membership
Candidate	Interview with joint Admissions/Study committees Promotion to first year affiliate Assignment of secondary sponsor and Study Committee member Notification by Admissions Chair of promotion and names of secondary sponsor and Study Committee member
1st year affiliate	Roundtable meeting with Study Committee Discussion of research project(s) you are considering or have interest Finalize research project with assigned Study Committee member** Promotion to 1 st year affiliate
2st year affiliate	Written proposal for research project due to Study Committee member** Proposal to include Background, Statement of the Problem, Purpose of the Study, Methodology, anticipated need for help (sample gathering, statistical treatment of data), personal timeline for completion Roundtable meeting with Study committee Promotion to 2 nd year affiliate
3rd year affiliate	Written progress report to Study Committee member** Roundtable meeting with Study Committee Promotion to 3 rd year affiliate If you present your paper this year, a structured abstract is due to Program Chair by September 1 st , and the final paper is due to your Study Committee member by September 1 st Acceptance of your presentation and paper fulfills your Study Committee admission requirement
4rd year affiliate	Written progress report to Study Committee member** Roundtable meeting with Study Committee Promotion to 4 th year affiliate If you present your paper this year, a structured abstract is due to Program Chair by September 1 st , and the final paper is due to your Study Committee member by September 1 st Acceptance of your presentation and paper fulfills your Study Committee admission requirement
5th year affiliate	You must present your paper this year. A structured abstract is due to Program Chair by September 1 st , and the final paper is due to your Study Committee member by September 1 st Acceptance of your presentation and paper fulfills your Study Committee admission requirement

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Edward H. Angle Society
Midwest Component
Affiliate Initial Evaluation

Print Form

Case #

Date:

Affiliate Name: _____ Case Selected: _____
Patient Name: _____ Alternate: _____

Models:

- a. Pour up
- b. Trimming
- c. Overall Diagnostic Quality

Affiliate: _____ Examiner #1: _____ Examiner #2: _____

Extra-oral Photographs:

- a. Frontal
- b. Profile

Intra-oral Photographs:

- a. Frontal
- b. Right Lateral
- c. Left Lateral
- d. Maxillary Occlusal
- e. Mandibular Occlusal

Intra-oral Radiographs:

- a. Panorex
- b. Other

Cephalometric Radiograph:

- a. Lateral
- b. A.P.

Diagnosis:

Treatment Plan:

Extractions:

Overall Treatment Objectives:

- a. Anchorage Control
- b. Overjet Control
- c. Vertical Control

Treatment Concerns:

Edward H. Angle Society

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Affiliate Progress Evaluation

Print Form



Affiliate Name: _____

Patient Name: _____

Case # _____

Records # _____

Date: _____

Diagnosis: _____

Treatment Plan: _____

_____ Tooth Extractions _____

Affiliate: _____ Examiner #1: _____ Examiner #2: _____

Models:

a. Overjet			
b. Overbite			
c. Rotations			
d. Spaces			
e. Symmetry			
f. Transverse			
g. Marginal Ridge Heights			
h. Intercuspatations			
i. Bracket Placement			

Photographic Facial Evaluation:

a. Profile			
b. Frontal			

Intraoral Radiographs:

a. Root Paralleling			
b. Resorption			
c. Periodontal			

Cephalometric Radiographs:

a. Skeletal Change			
b. Incisor Control			
c. Tracings			

Overall Treatment Objectives:

a. Anchorage Control			
b. Overjet Control			
c. Vertical Control			

Treatment Concerns:

Summary and Conclusions:

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Edward H. Angle Society
Midwest Component
Affiliate Final Evaluation

Affiliate Name: _____
Patient Name: _____

Case # _____
Records # _____
Date: _____

Diagnosis: _____

Treatment Plan: _____ **Tooth Extractions** _____

Models: _____ **Affiliate:** _____ **Examiner #1:** _____ **Examiner #2:** _____

a. Overjet			
b. Overbite			
c. Rotations			
d. Spaces			
e. Symmetry			
f. Transverse			
g. Marginal Ridge Heights			
h. Intercuspatations			
i. Bracket Placement			
Photographic Facial Evaluation:			
a. Profile			
b. Frontal			
Intraoral Radiographs:			
a. Root Paralleling			
b. Resorption			
c. Periodontal			
Cephalometric Radiographs:			
a. Skeletal Change			
b. Incisor Control			
c. Tracings			
Overall Treatment Objectives:			
a. Anchorage Control			
b. Overjet Control			
c. Vertical Control			
Treatment Concerns:			
Summary and Conclusions:			

Example of Permission Form for Patients

(For your use, this synopsis form is included as a separate file at http://www.anglemidwest.org/uploads/5/6/3/5/56356009/permission_form.pdf)

Orthodontist's Name _____

Patient's Name _____

The Edward H. Angle Society is dedicated to furthering orthodontic knowledge and maintaining the highest standards of orthodontic care. As part of our education program, your treatment records may be displayed for the benefit of the members of the Angle Society. We are asking your permission for the display of your records. Please know that you have a right to refuse permission. Please sign and date below.

Sincerely,

I give my permission for the use of my orthodontic records for the above purposes.

(Patient's or Parent's signature)

(Date)