# 2014 JCO ORTHODONTIC DIAGNOSIS AND TREATMENT STUDY

Thank you for participating in this nationwide survey of orthodontic diagnosis and treatment procedures. Please make every effort to complete all portions of the questionnaire. Complete and return this form <u>only</u> if you are in a private specialty orthodontic practice. If there is more than one orthodontist in your practice, file only one questionnaire for the practice. **To fill out this questionnaire online**, see the instructions on p. 334 in this issue or on the JCO homepage at www.jco-online.com. The deadline for inclusion in the Study is Aug. 20, 2014.

- 1. Your present age: \_\_\_\_\_ 2. Gender: Male \_\_\_\_\_ Female \_\_\_\_\_
- 3. Number of years in orthodontic practice:
- Your main office ZIP code: \_\_\_\_\_
- 5. Your practice's 2013 gross income (select one): 
   \$500,000 or less
   \$1,200,001-1,500,000

   \$500,001-900,000
   \$1,500,001-1,800,000

   \$900,001-1,200,000
   More than \$1,800,000
- **6.** Number of orthodontists in your practice (including yourself):
- 7. Number of patients currently in active treatment:
- 8. Age of youngest current patient:

X

X

9. Age of oldest current patient: \_\_\_\_\_

10. At what age do you normally recommend a first orthodontic examination? \_\_\_\_\_

11. At what age do you normally recommend beginning treatment?

12. What is the percentage of adult patients (18 or older) in your practice? \_\_\_\_\_ %

13. What is the percentage of two-phase treatment cases in your practice? \_\_\_\_\_ %

14. How often do you normally see patients in active treatment (please select one)?

 it (please select s...,

 4-week intervals \_\_\_\_\_

 5-week intervals \_\_\_\_\_

 6-week intervals \_\_\_\_\_

 0-week intervals \_\_\_\_\_\_

 0-ther (please specify): \_\_\_\_\_\_

# DIAGNOSIS

# Imaging

15. Select the box in each pair of columns that best describes how often you use the diagnostic method in each stage of treatment. Leave the item blank if you never use the method at that stage. Please consider your usage of each method for all cases (ages and types).

	Pretreatment		Progress		Post-Treatment	
	Occasionally	Routinely	Occasionally	Routinely	Occasionally	Routinely
Full series x-rays						
Bite wing x-rays						
Panoramic x-rays						
Transcranial TMJ x-rays						
Computed tomography						
Cone-beam computed tomogra	aphy 🗖					
Intraoral digital scanning						
Magnetic resonance imaging						
Cervical radiography						
Occlusograms						
Periodontal charts						

**16.** Do you use digital radiography? Yes \_\_\_\_\_ No

17. Select the box in each pair of columns that best describes how often you use the following cephalometric x-rays in each stage of treatment. Leave the item blank if you never use the diagnostic method at that stage. Please consider your usage of each method for all cases (ages and types).

	Pretre	atment	Prog	ress	Post-Trea	atment
	Occasionally	Routinely	Occasionally	Routinely	Occasionally	Routinely
In centric occlusion						
In centric relation						
Cephalostat						
Natural head position						
Frontal						
Submental vertex						

18. Select the box in each pair of columns that best describes how often you use the diagnostic method in each stage of treatment. Leave the item blank if you never use the method at that stage. Please consider your usage of each method for all cases (ages and types).

	1 109	ress	Post-Trea	atment
y Routinely	Occasionally	Routinely	Occasionally	Routinely
	y Routinely	y Routinely Occasionally	y Routinely Occasionally Routinely	y Routinely Occasionally Routinely Occasionally Caracteria Constraints Occasional Caracteria Constraints Occasional Caract

### **Study Casts**

**19.** Select the box in **each pair of columns** that best describes how often you use the diagnostic method in each stage of treatment. Leave the item blank if you **never** use the method at that stage. Please consider your usage of each method for **all cases** (ages and types).

Pretrea	atment	Prog	ress	Post-Trea	atment
asionally	Routinely	Occasionally	Routinely	Occasionally	Routinely
	asionally	Pretreatment casionally Routinely	casionally Routinely Occasionally	casionally Routinely Occasionally Routinely	casionally Routinely Occasionally Routinely Occasionally

#### **Cephalometric Analysis**

**20.** Select the column that best describes how often you use **any** cephalometric analysis in each stage. Leave the item blank if you **never** use cephalometric analysis in that stage. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Pretreatment		
Progress		
Post-treatment		

**21.** Select the column that best describes how often you use **each analysis** that makes up your overall analysis. Leave the item blank if you **never** use the analysis. Please consider your usage of each analysis for **all cases** (ages and types).

	Occasionally	Routinely
Alexander		
Burstone		
Downs		
Holdaway		
Jarabak		
Johnston		
McNamara		

ic Analysis	
Ricketts Sassouni Steiner Tweed Wits "Eyeball"	
Own analysis Other (please specify):	

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**22.** Select the column that best describes how often you use each method. Leave the item blank if you **never** use the method. Please consider your usage of each method for **all cases** (ages and types).

	Occasionally	Routinely
Manual tracing		
Computerized tracing		
Computer imaging and analysis		
Templates (Bolton, Jacobson, etc.) VTO		

# Archform

**23.** Select the column that best describes how often you use **each analysis**. If you use a combination of analyses, check the appropriate column for **each analysis** that makes up your overall analysis. Leave the item blank if you **never** use that analysis. Please consider your usage of each analysis for **all cases** (ages and types).

	Pretrea	atment	Prog	ress	Post-Trea	atment
	Occasionally	Routinely	Occasionally	Routinely	Occasionally	Routinely
Tweed arch-length analysis						
Bolton Index						
Alexander						
Andrews						
Brader						
Damon						
Ricketts						
Roth						
Customized archform						
Computer-generated archform	n 🗆					
Own analysis						
Other (please specify):						

# TREATMENT

# **Fixed Appliances**

24. Select the column that best describes how often you use each **preadjusted prescription** fixed appliance. Leave the item blank if you **never** use the appliance. Please consider your usage of each appliance for **all cases** (ages and types).

	Occasionally	Routinely
Andrews		
Butterfly		
Damon		
MBT		
Orthos		
Roth		
Other preadjusted prescription		
fixed appliance (please specify	/):	

25. Select the column that best describes how often you use each **self-ligating bracket.** Leave the item blank if you **never** use that appliance. Please consider your usage of each appliance for **all cases** (ages and types).

	Occasionally	Routinely
Carriere		
Damon		
In-Ovation		
SmartClip		
SPEED		
Other self-ligating bracket (pl	ease specify):	

28. Please indicate the percentage of each bracket material you place. Leave the item blank if you never use it. Please consider your usage for all cases (ages and types). All answers must add up to 100%.

Stainless steel	%
Gold %	
Titanium %	
Clear %	
Ceramic %	
Plastic %	
Combination	%
Other %	

X

X

**29.** Please indicate the percentage of brackets you place in each slot size. Leave the item blank if you **never** use that slot size. Please consider your usage for **all cases** (ages and types). All answers must add up to 100%.

**26**. Select the column that best describes how often you use each type of fixed appliance. Leave the item blank if you **never** use the appliance. Please consider your usage of each appliance for **all cases** (ages and types).

	Occasionally	Routinely
Begg		
Bidimensional		
Bioprogressive		
Lingual		
MEAW		
Standard edgewise		
Tip-Edge		
Transpalatal arches		
Other fixed appliance		
(please specify):		

**27**. Select the column that best describes how often you use each **palatal expansion appliance.** Leave the item blank if you **never** use that appliance. Please consider your usage of each appliance for **growing patients only.** 

	Occasionally	Routinely
Haas		
Hyrax		
Quad Helix		
Miniscrew-supported		
Other (please specify):		

#### Brackets

.018" slot	%		
.022" slot	%		
Bidimensional		%	
Other slot	%		

**30.** Please indicate the percentage of brackets you place in each category. Leave the item blank if you **never** use that category. Please consider your usage for **all cases** (ages and types). All answers must add up to 100%.

Single	%
Twin	%
Other	%

**31.** Please indicate the percentage of brackets you place in each category. Leave the item blank if you **never** use that category. Please consider your usage for **all cases** (ages and types). All answers must add up to 100%.

Standard ligated \_\_\_\_\_ % Miniaturized ligated \_\_\_\_\_ % Active self-ligating \_\_\_\_\_ % Passive self-ligating \_\_\_\_\_ % Other \_\_\_\_\_ %

**32.** Please indicate the percentage of bracket base types you place in each category. Leave the item blank if you **never** use that base. Please consider your usage for **all cases** (ages and types).

Mesh base %	
Non-mesh base %	
Chemically enhanced base	%
Microetched base (laboratory)	
/3	%
Sandblasted base (in-office)	%
33. What percentage of your brack	kets

**33.** What percentage of your brackets do you recycle?

Metal \_\_\_\_\_ % Clear/ceramic \_\_\_\_\_ %

## **Bonding and Banding**

**34.** Select the column that best describes how often you use each method. Leave the item blank if you **never** use that method. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Direct bonding		
Labial indirect bonding		
Lingual indirect bonding		
Two-part chemical-cure sealan	t 🗅	
Light-cured flowable microfill		
Glass ionomer for bonding		

	Occasionally	Routinely
Enamel-protective sealant		
Fluoride varnish		
Adhesion booster		
Phosphoric acid etchant		
Self-etching primer		

**36.** What percentage of your bonds fail? Leave the item blank if you **never** use that type of bonding. Enter 0 if you never have bond failures for that type of bonding.

Labial \_\_\_\_\_ % Lingual \_\_\_\_\_ %

**37.** Which teeth do you find have the highest bond failure rate (select one)?

Maxillary anterior	Maxillary posterior
Mandibular anterior	_ Mandibular posterior

**38.** How frequently do you bond the following molars? Leave the item blank if you **never** bond those molars. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Maxillary second molars		
Maxillary first molars		
Mandibular second molars		
Mandibular first molars		

39. Select the column that best describes how often you use each type of bonding adhesive. Leave the item blank if you never use that adhesive.Chemically cured no-mix

Chemically cured two-paste	
Light-cured no-mix	
Light-cured two-paste (dual cure)	
Light-cured precoated	
Other (please specify):	

**40.** If you use light-cured adhesive, what is the length of light exposure per tooth? \_\_\_\_\_\_ seconds.

**41.** If you use light-cured adhesive, what is your preferred type of curing light? Select only one answer.

Halogen (corded) \_\_\_\_ LED \_\_\_\_ Laser \_\_\_\_ Plasma arc \_\_\_\_

**42.** Select the column that best describes how often you band molars and premolars. Leave the item blank if you **never** band those teeth. Please consider your usage for **all cases** (ages and types).

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	Occasionally	Routinely	
Maxillary second molars			
Maxillary first molars			
Maxillary second premolars			
Maxillary first premolars			
Mandibular second molars			
Mandibular first molars			
Mandibular second premolars	s 🛛		
Mandibular first premolars			
<b>43.</b> Select the column that be each type of banding cement		•	е

never use that cement. Glass ionomer Light-cured glass ionomer One-paste compomer (light-cured) Two-paste compomer Zinc phosphate Other (please specify): 

### Wires

44. Select the box in each pair of columns that best describes how often you use each wire in both early and finishing stages of treatment. Leave the item blank if you never use the wire in that stage. Please consider your usage for all cases (ages and types).

	Ear	'ly	Finisł	ning
	Occasionally	Routinely	Occasionally	Routinely
Stainless steel				
Nultistranded/braided stainless steel				
Chrome cobalt nickel (Elgiloy, etc.)				
Nickel titanium (including CuNiTi)				
Multistranded/braided nickel titanium				
Titanium molybdenum (TMA)				
Thermally activated titanium				
Coated				
Computer-generated				
Other (please specify):				
· · · · · ·				

**45.** How many archwires do you use in your typical **extraction** treatment sequence?

46. How many archwires do you use in your typical nonextraction treatment sequence? Maxillary Mandibular

Maxillary \_\_\_\_\_ Mandibular \_\_\_\_\_

## Removable/Functional/Molar Distalizing Appliances

**47.** Select the column that best describes how often you use each appliance. Leave the item blank if you **never** use that appliance. Please consider your usage for **all cases** (ages and types).)

	Occasionally	Routinely		Occasionally	Routinely
Biteplates			Schwarz plates		
Bite blocks			Other multi-class appliance		
Fränkel I			(please specify):		
Fränkel II					

**48.** Select the box in **each pair of columns** that best describes how often you use each removable appliance for **each type of case.** Leave the set of columns blank if you **never** use the appliance for that case type. Leave the entire item blank if you never use the appliance for **any listed case type.** 

	Clas	is I	Clas	s II	Class	. 111	Space C	losure	Extra	oction
	Occa- sionally	Rou- tinely								
Biteplates										
Bite blocks										
Fränkel I										
Fränkel II										
Schwarz plates										
Other multi-class a (please specify):	ppliance									
(1										

**49.** Select the column that best describes how often you use each appliance. Leave the item blank if you **never** use that appliance. Please consider your usage of each appliance **only** for the appropriate treatment type. For example, if you routinely use the Distal Jet for Class II cases then select Boutinely.

**50.** Select the column that best describes your **usual** fabrication method for each appliance. Leave the item blank if you **never** use that appliance.

for the appropriate treatmen ly use the Distal Jet for Cla			Activator	In-Office	Outside Lab
	Occasionally	Routinely	Bionator		
Activator			Biteplates		
Bionator			Bite blocks		
Class II Corrector			Forsus		
Distal Jet			Fränkel I		
Forsus			Fränkel II		
Fränkel III			Fränkel III		
Fränkel IV			Fränkel IV		
Banded Herbst			Banded Herbst		
Bonded Herbst			Bonded Herbst		
Crown Herbst			Crown Herbst		
Fixed/removable Herbst			Fixed/removable Herbst		
Hilgers Pendulum			Hilgers Pendulum		
Jasper Jumper			Jasper Jumper		
MARA			MARA		
Sagittal			Sagittal		
Twin Block			Schwarz plates		
Other appliance (please sp	ecify):		Twin Block		
			Other appliance (please specify	):	

### Headgear

**51.** Select the column that best describes how often you use each type of headgear. Leave the item blank if you **never** use that headgear. Please consider your usage of each headgear **only** for the appropriate treatment type. For example, if you routinely use the Kloehn facebow for Class II cases, then select Routinely.

	Occasionally	Routinely		Occasionally	Routinely	
Kloehn facebow			Combi			
J-hook			Chin cup			
Cervical-pull			Facial mask			
Straight-pull			Safety/breakaway			
Variable straight-pull			Other (please specify):			
High-pull						

#### Extraction

52. In what percentage of all active cases do you use...

Extraction? \_\_\_\_\_ % Third molar enucleation? \_\_\_\_\_ %

53. In what percentage of growing patients do you use serial extraction? \_\_\_\_\_ %

#### 54. In what percentage of extraction cases do you extract...

Upper first premolars only? % Lower first premolars only? % % Upper and lower first premolars? % Upper and lower second premolars? Upper first and lower second premolars? % Upper second and lower first premolars? % % Upper and/or lower first molars? Upper and/or lower second molars? % Upper and/or lower third molars? % Lower incisors? %

# **Finishing Procedures**

**55.** Select the column that best describes how often you use each finishing procedure. Leave the item blank if you **never** use that procedure. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Fiberotomy		
Gingivectomy for gingival hyperplas		
Gingivectomy for esthetic recontour	ing 🗖	
Frenectomy		
Zig-zag (up-and-down) elastics		
Equilibration		
Positioner		
Anterior stripping (slenderizing)		
Posterior stripping		
Soft-tissue laser procedures		

**56.** Select the column that best describes how often you use each cosmetic finishing procedure. Leave the item blank if you **never** use that procedure. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Incisal adjustment		
Shaping labial/lingual surface		
Porcelain laminate veneer		
Composite resin build-up		
Full ceramic crowns		

57. Select the column that best describes how often you use each anterior stripping (slenderizing) method. Leave the

item blank if you **never** use that method. Please consider your usage only for cases when you use anterior stripping. If you **never** use anterior stripping, please skip the question.

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	Occasionally	Routinely
Hand instruments		
Low-speed handpiece		
High-speed handpiece		

**58**. Select the column that best describes how often you use each **posterior stripping** method. Leave the item blank if you **never** use that method. Please consider your usage **only** for cases when you use posterior stripping. If you **never** use posterior stripping, please skip the question.

	Occasionally	Routinely
Hand instruments		
Low-speed handpiece		
High-speed handpiece		

**59**. Select the column that best describes how often you use each **soft-tissue laser procedure.** Leave the item blank if you **never** use that procedure. Please consider your usage **only** for cases when you use soft-tissue laser procedures. If you **never** use soft-tissue laser procedures, please skip the question.

	Occasionally	Routinely
Exposure of impacted teeth		
Removal of opercula		
Frenectomy		
Gingivectomy		
Ankyloglossia		

#### Retention

**60.** Select the column that best describes how often you use each **removable** retainer. Leave the item blank if you **never** use that retainer. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Hawley		
Spring retainer		
Modified spring retainer		
Essix		
Invisalign/Vivera		
Other (please specify):		

**61.** Select the column that best describes how often you use each **fixed banded** retainer. Leave the item blank if you **never** use that retainer. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
3-3		
4-4		
5-5		
6-6		

**62.** Select the column that best describes how often you use each **fixed bonded** retainer. Leave the item blank if you **never** use that retainer. Please consider your usage for **all cases** (ages and types).

	Occasionally	Routinely
Maxillary 1-1		
Maxillary 2-2		
Maxillary 3-3		
Maxillary 4-4		
Mandibular 1-1		
Mandibular 2-2		
Mandibular 3-3		
Mandibular 4-4		

**63.** What is your average duration of retention? Please give the average for **all cases** (ages and types).

	Occasionally	Routinely
Permanent		
Long-term (up to 10 years) Short-term		
(please specify number of months):	0	

64. What is your average number of retention visits? \_\_\_\_

## **Surgical-Orthodontic Treatment**

**65.** How many surgical-orthodontic cases did you treat in 2013? Please enter 0 if you had no surgical-orthodontic cases in 2013. \_\_\_\_\_

**66.** If you treated surgical-orthodontic cases in 2013, what was the average length of treatment?

Presurgical: \_\_\_\_\_ months

Postsurgical: \_\_\_\_\_ months

X

X

**67.** How many patients did you treat with accelerated orthodontics in 2013? Please enter 0 if you did not treat any patients with accelerated orthodontics in 2013. \_\_\_\_\_

**68.** Select the column that best describes how often you use each accelerated treatment method. Leave the item blank if you **never** use that method. Please consider your usage **only** for patients you treated with accelerated orthodontics. If you **did not** use accelerated orthodontics in 2013, please skip the question.

	Occasionally	Routinely
Sugawara "surgery first"		
Distraction osteogenesis		
SureSmile		
Insignia		
Piezocision		
Laser		
Vibration (AcceleDent)		
Alveocentesis (Propel)		
Other (please specify):		

#### TMJ Treatment

**69.** How many TMJ patients did you treat in 2013? Please enter 0 if you treated no TMJ patients in 2013. \_\_\_\_\_

**70.** Select the column that best describes how often you use each TMJ treatment method. Leave the item blank if you **never** use that method. Please consider your usage **only** for TMJ patients.

	Occasionally	Routinely
Orthotic splints		
NTI splints		
Functional appliances		
Fixed appliances		
Equilibration		
TENS unit		
EGS unit		
Ultrasonic heat		
Fluoromethane spray and stretch		

iment	
Biofeedback	
Myofunctional therapy	
Acupuncture	
Palliative (reassurance, hot/cold, etc.)	
Drug therapy	
Physical therapy	
Arthroscopy	
Orthognathic surgery	
Other (please specify):	

**71.** Please indicate your percentage of **TMJ patients** in each category.

Combined with orthodontic treatment: \_\_\_\_\_ % Referred to other specialist: \_\_\_\_\_ % Successful (asymptomatic one year post-treatment): \_\_\_\_\_ %

#### **Aligner Treatment**

**72.** How many patients did you treat using sequential clear aligners (Invisalign, Smart Moves, etc.) in 2013? Please enter 0 if you did not treat any patients with clear aligners in 2013.

**73.** How many cases did you treat with **aligners only** in 2013? \_\_\_\_\_

**74.** How many cases did you treat with **aligners and fixed appliances** in 2013? \_\_\_\_\_

75. What is the average age of your aligner patients? \_\_\_\_

**76.** What is the average number of aligners you use per case? \_\_\_\_\_

**77.** What percentage of your aligner cases do you consider successful? \_\_\_\_\_ %

**78.** What percentage of your aligner cases relapse? \_\_\_\_\_ %

**79.** Select the column that best describes how often you use clear aligners to treat each type of case. Leave the item blank if you **never** use clear aligners for that type of case. Please consider your usage for **all ages.** 

	Occasionally	Routinely
Class I, moderate crowding		
Class I, severe crowding		
Class II		
Class III		
Space closure		
Upper premolar extraction		
Lower premolar extraction		
Four-premolar extraction		
Lower incisor extraction		
Finishing/positioner		
Other (please specify):		

#### Do not mail a photocopy of the business-reply form; use only the original page for mailing.

## **Skeletal Anchorage**

**80.** How many patients did you treat with temporary anchorage devices (miniscrews) in 2013? Please enter 0 if you did not treat any patients with miniscrews in 2013.

81. In what percentage of these patients did you use ...

Interradicular miniscrew sites? \_\_\_\_\_ % Palatal miniscrew sites? \_\_\_\_\_ % Other sites? \_\_\_\_\_ % A combination of sites? \_\_\_\_\_ %

**82**. What is the average age of your skeletal anchorage patients? \_\_\_\_\_

**83.** Has the availability of skeletal anchorage reduced your number of surgical-orthodontic cases?

Yes \_\_\_\_\_ No \_\_\_\_ Unsure \_\_\_\_

84. Who usually places the miniscrews (select one)?

Orthodontist \_\_\_\_ Oral surgeon \_\_\_\_ Periodontist \_\_\_\_ General dentist \_\_\_\_

85. What is your percentage of...

Miniscrew failures? \_\_\_\_\_ % Loose miniscrews? \_\_\_\_\_ % Miniscrews causing inflammation at insertion site? \_\_\_\_\_ % **86.** Where did you receive your training in skeletal anchorage treatment (select **all** that apply)?

Dental school Dental school Postgraduate course

□ Proprietary course □ Other (please specify):

**87.** Select the column that best describes how often you use skeletal anchorage to treat each type of case. Leave the item blank if you **never** use skeletal anchorage for that type of case. Please consider your usage for **all ages**.

	Occasionally	Routinely
Class I, crowding		
Class II		
Class III		
Bimaxillary protrusion		
Premolar extraction		
Open bite		
Molar intrusion		
Molar distalization		
Molar uprighting		
Incisor translation/inclination		
Midline correction		
Other (please specify):		





POSTAGE WILL BE PAID BY ADDRESSEE

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