SUPPLEMENTARY FILE 5
Primary Cam Morphology Delphi – Round 1 and 2

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Definition of consensus

Table 4 Definition of consensus

Category	Definition	Action
Consensus in (high agreement)	Statement scored as critical (7 to 9) by ≥70% of panel members *and* not important (1 to 3) by <15% of panel members	Item retained for the next survey round/consensus meeting
Consensus out (low agreement)	Scored as not important (1 to 3) by ≥70% of panel members *and* critical (7 to 9) by <15% of panel members	Item discarded after round 2 (to be ratified at the face-to-face consensus meeting)
No consensus	Neither criteria above are met	Item retained for the next survey round/consensus meeting
Unable to score or provide feedback	Panel member unable to score the statement or provide a score and qualitative feedback	Provide the opportunity for panel members to indicate that they are unable to score the statement and/or to provide feedback (including statement rewording). Steering committee will consider retaining a reworded item for the next survey round.

General Comments after Round 1

- I have no special training in this area (eg medical; physiotherapy; radiology etc) and therefore feel somewhat unqualified to answer some of these questions. I have just done my best as a lay person; using the knowledge from my career as a former elite athlete and now coach; and from webinars 1 and 2.
- Thanks for doing such a thorough job of curating the vast number of research questions that could be answered. I hadn't dreamed that there might be so many.
- Fantastic and important work.----I did not answer some of the technical radiography questions as I feel even with the help text it would be biased of me to answer them without a great depth of knowledge on the techniques involved.
- VERY comprehensive; congratulations!; MB
- I don't think the categorization of the 1-9 as critical; important; but not critical;... were appropriate in terms of agreeing to statements; only for priorities.
- Well designed; good luck.
- Great work!!!!----Really amazing effort
- I think it is really important to come up with a consensus on the terminology and how the health care providers tell patients they have this condition. It is also really important to come up with a consensus on how radiologists should document the findings in the MRI so that this does not cause unnecessary catastrophizing--like it did in my own personal hip journey.----For interventions; it will be helpful to better identify subgroups that will benefit from mobility vs stabilization vs combined interventions to help make PT treatments more targeted. ----It will be helpful to know what the recommendations are for younger people involved in high level sports who are at risk of developing FAI syndrome later in life. Can we do a certain screen once the

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athlete stops playing or retires---and what information from this screen would indicate someone is at risk for developing symptomatic FAIs?----

- Instructive questioning. Thanks
- many questions very close to each other; difficult to distinguish...
- I noted a research priority regarding physiotherapy vs surgical outcomes - it would be interesting to look at physical activity interventions and/or non-surgical treatments (eg injections) alongside these;
- Overall it is a very good first round. I found it somewhat difficult to answer some research section statements; specifically when using the term 'studies'; which is quite generic.
- Great work; looking forward to the next steps!----Greetings

General comments after Round 2 (additional to Round 1)

- Fantastic work.
- Excellent presentation of round1 results among stakeholders
- Comments:
    - **Question 1**: I think the statement should remove the word abnormal. It seems that specific types of loading influence the development of a cam morphology. As we do not know details of which loads are key in this regard; the use of normal response to load may not be accurate. I would agree with the statement: “Primary cam morphology develops during skeletal maturation as a physiological response to load” or “Primary cam morphology develops during skeletal maturation as a physiological response to specific types of load”
    - **Question 2**: Same as question 1. I think the statement should remove the word “abnormal”. It seems that specific types of loading influence the development of a cam morphology. As we do not know details of which loads are key in this regard; the use of normal response to load may not be accurate. --as the second part of the question is covered in question one; the statement could be shortened to: “Primary cam morphology is not caused by previous disease; injury or an acute event”. I would agree with this.
    - **Question 3:** I think the word “existing” should be changed to “pre-existing”. I do not think a healed proximal femoral fracture; as in the example; classify as an existing disease; rather a disease existing prior to the cam development therefore “pre-existing” or “prior” or “preceding”. (disclaimer: English is not my first language).
    - **Question 7**: Could the statement possibly be modified to add “known” before history? If there is no history of disease it cannot be proven otherwise, correct? so the statement would be: “Cam morphology that develops in young and active individuals without any symptoms (e.g.; hip-related pain; stiffness) or known history of previous/existing hip disease; is primary cam morphology until proven otherwise.
    - **Questions 12**: I suggest changing “possibly” to “probably” before “due to high-load sporting activity and other unconfirmed risk factors”
    - **Questions 13-31**: Regarding preferred terms; there is probably a difference between preferences for communication between medical professionals (who may need specific terminology) and between

patients (who may benefit from more general terms to understand it better - e.g. “non-rounded” etc). This should be investigated.

- **Question 40**: I think the imaging should be repeated with even shorter intervals between (around 12 months).

- Thanks for the invite to participate!
- CONGRATS!----Important study!!
- The initial set of questions were not clear to me. None of the statements seemed to describe the terminology adequately; apart from the last one; which is why I initially scored them so low. However; on reviewing the other participants' answers; I realized I misunderstood. My understanding now is that each of these statements are important (in as far as they contain an element of the final definition; which is why I scored them much higher); even if they do not contain the full definition. The only statement to my mind which is less important is that it develops in both hips - whilst this is often the case; it is not always true.----Happy to explain more in person if this is not clear!
- Interesting and well conducted
- On this round I could not found the comment button by the statements.
- Eek. I was trying to enter reasons for the others and hit "enter" instead of tabbing to the next one. --The only big change was from 4 to 7... which now I can't really remember why. Most other changes were 1 point; and where more likely my "regression toward a mean" than anything else.
- Great process! Thanks again for including me.
- I just wonder how the patients can interpret so many technical terms. Regarding the studies; I also considered feasibility and whether there is strong conceptual background knowledge on which to build a reasonable hypothesis. So it is not just a rate on the importance.
- Thank you. It was an interesting exercise to measure my votes against that of colleagues and other disciplines.
- Great work; looking forward to the next round!

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Additional Statements proposed by panel

1. Determine which type of study (Prospective cohort; RCT) will best answer a specific research question (as it is listed currently it is very difficult to get you head around the options listed on p.5) regarding aetiology, diagnosis, prognosis and management

Steering committee response:

This can be part of the discussion(s) following the Delphi online rounds

2. (unsure of how to word this but....) a research priority related to how diagnosis, rehab, return to sport impacted the mental health of young athletes (and others)

Steering committee response:

Studies exploring how diagnosis, rehabilitation and return to sport potentially impact the mental health of young athletes (and others) – consider this as part of the online stakeholder group discussions

3. In athletes with cam morphology, which movement patterns (prognostic screening) contribute to or reduce the incidence of FAIS?

Steering committee response:

Studies to investigate which movement patterns (prognostic screening) contribute to or reduce the incidence of FAI syndrome in athletes with primary cam morphology – consider this as part of the online stakeholder group discussions (part of studies on primary cam morphology prognosis studies)

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Summary: consensus and tension points / areas of dissent

- Consensus on 35 of 47 statements in Domains 1 to 4
- Consensus to further prioritise (using the ENHR method) 18 of 38 Research Statements (Domain 5)

Domain	**Statements and expert panel opinions**	**Areas of tension and dissent**	**Proposed Action & topics for discussion**
Definitions	Consensus on 9/12 statements No consensus on 3/12 statements: statements 6,7,9	"unknown origin" Primary cam morphology often occurs in **male athletes in both hips** "I do not agree that the concept of Primary and secondary CAM is commonly agreed and established"	Statement 6: Primary cam morphology **ALSO** includes cam morphology of unknown origin Higher prevalence in males due to lack of research in female cohorts
Terminology	Consensus on 16/19 statements No consensus on 3/19 statements: statements 23,24,25	No consensus: "**Cam-type impingement** is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction" "**Cam femoroacetabular impingement (FAI)** is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction" "**Cam-type femoroacetabular impingement (FAI)** is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction"	Consensus to use: "Cam morphology is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction" "Femoroacetabular impingement (FAI) Syndrome with cam morphology is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction" Consensus to avoid: "lesion"; "deformity"; "abnormality"; "pistol grip deformity"
Taxonomy	Consensus on 3/4 statements	**Statement 34:** We should distinguish between primary and secondary cam morphology in **patients** with femoroacetabular impingement syndrome	Discuss: differences in opinion on importance /

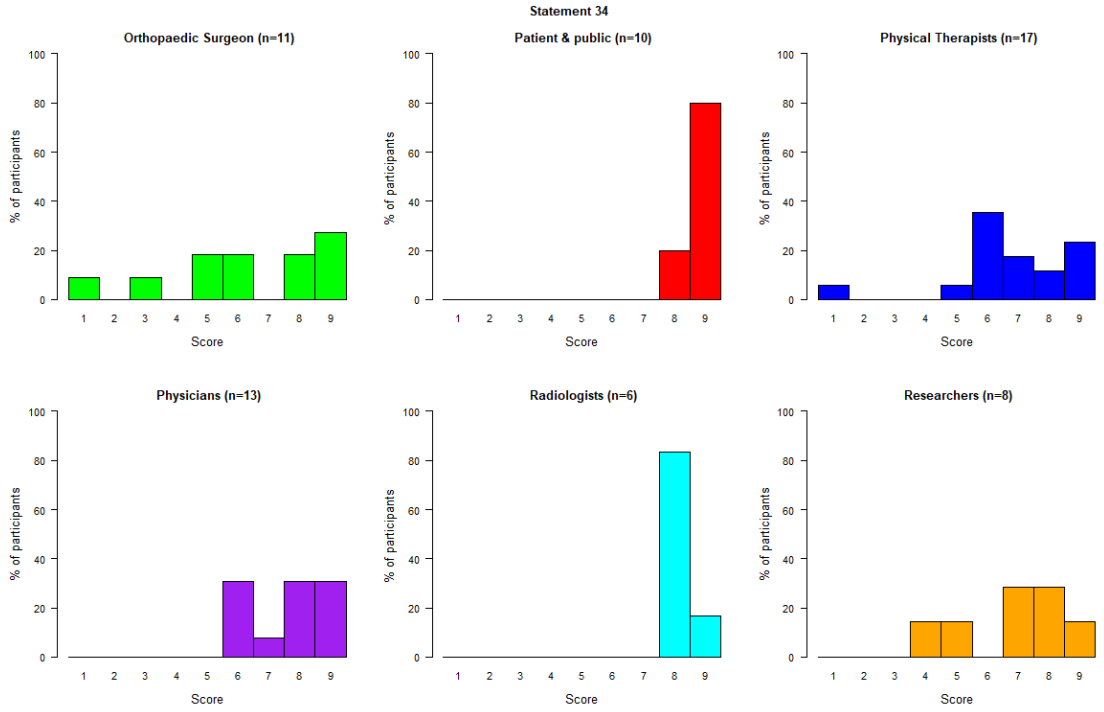
	No consensus on 1 statement: statement 34	Very close to achieving consensus: Percentage panelists that scored the statement as critical: 66.1% (R1) and 68.8% (R2) Percentage panelists that scored the statement as not important: 6.5% (R1) and 4.7% (R2)	difficulty to distinguish between primary and secondary cam morphology in clinical practice when treating patients with femoroacetabular impingement syndrome Consider Round 3 for statement 34
Imaging Outcomes	Consensus on 7/12 statements No consensus on 5/12 statements: statements 40,43, 44,45,46	No consensus (consider Round 3 for 3 statements in bold approaching consensus): Statement 40: "The magnetic resonance (MR) imaging for prospective research on how primary cam morphology develops should be repeated every 18 to 24 months" **Statement 43**: "For research on how primary cam morphology develops it is important to quantify the epiphyseal morphology magnetic resonance (MR) imaging outcome measure using epiphyseal extension" **Statement 44**: "For research on how primary cam morphology develops the epiphyseal morphology magnetic resonance (MR) imaging outcome measure should also be quantified using epiphyseal tilt" **Statement 45**: "The main imaging modality for longitudinal primary cam morphology prognosis research should be anteroposterior (AP) pelvis and Dunn 45° view radiographs repeated at least every 5 years" **Statement 46**: "The radiographic imaging outcome measure for research on primary cam morphology prognosis should be the alpha angle as a continuous variable reported for anteroposterior (AP) pelvis and Dunn 45° view radiographs."	"I just wonder how the patients can interpret so many technical terms" Consider Round 3 for statements 43, 44, 45,46

Statements to consider for Round 3 (4 statements are close to ALL PANELIST or RADIOLOGIST STAKEHOLDER GROUP consensus)

1. **TAXONOMY: Statement 34** We should distinguish between primary and secondary cam morphology in patients with femoroacetabular impingement syndrome

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	66.1%	68.8%
Percentage panelists that scored the statement as not important	6.5%	4.7%

RESULT	**NO CONSENSUS**	**NO CONSENSUS**



2. **IMAGING OUTCOME: Statement 43** For research on how primary cam morphology develops it is important to quantify the epiphyseal morphology magnetic resonance (MR) imaging outcome measure using epiphyseal extension

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	57.1%	65.9%
Percentage panelists that scored the statement as not important	4.8%	0%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

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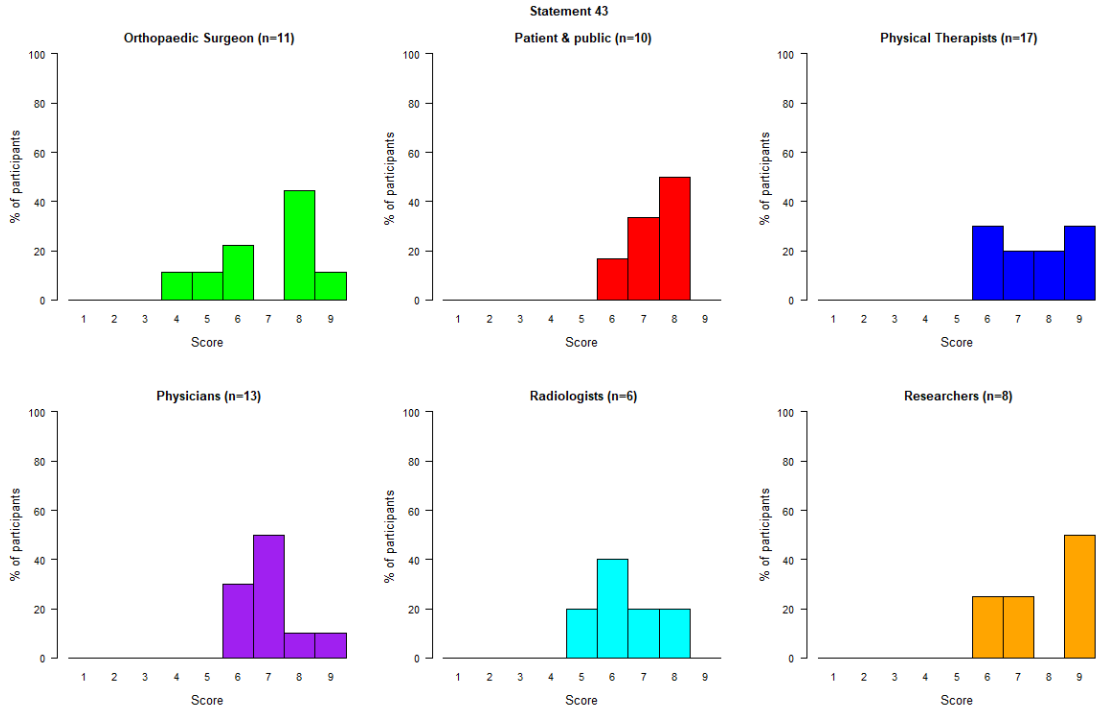

3. **IMAGING OUTCOMES: Statement 45** The main imaging modality for longitudinal primary cam morphology prognosis research should be anteroposterior (AP) pelvis and Dunn 45° view radiographs repeated at least every 5 years

ALL PANELISTS:

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	44.9%	42.3%
Percentage panelists that scored the statement as not important	20.4%	15.4%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

RADIOLOGISTS:

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	66.7%	66.7%
Percentage panelists that scored the statement as not important	33.3%	33.3%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

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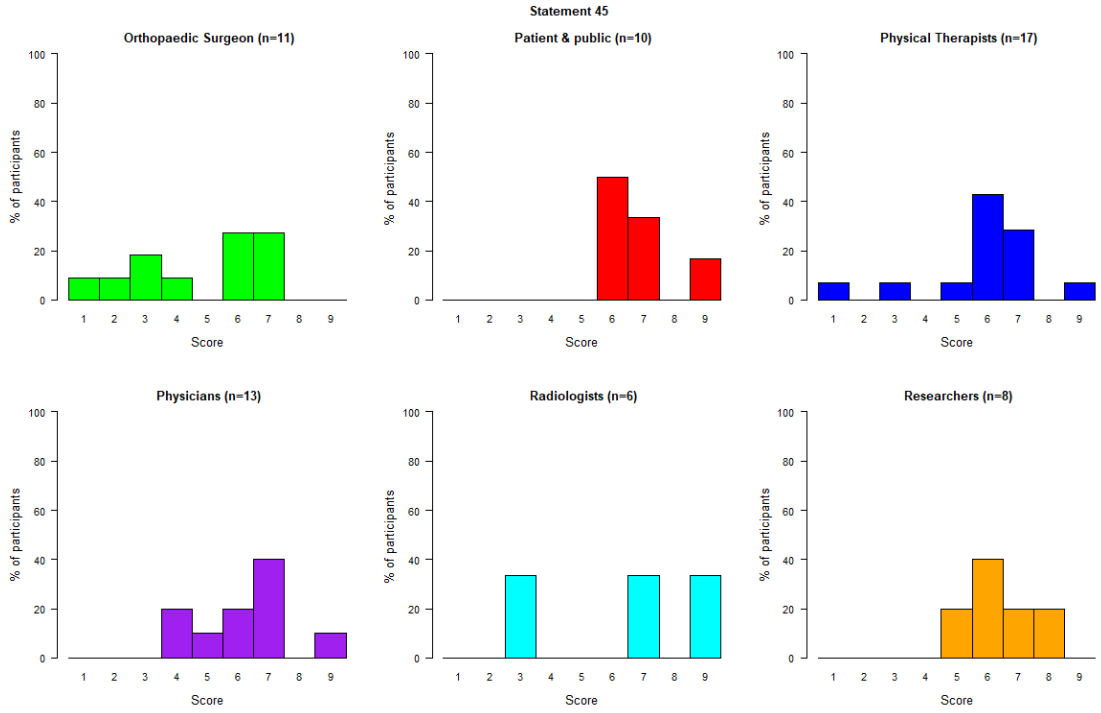

4. **IMAGING OUTCOME: Statement 46** The radiographic imaging outcome measure for research on primary cam morphology prognosis should be the alpha angle as a continuous variable reported for anteroposterior (AP) pelvis and Dunn 45° view radiographs.

ALL PANELISTS:

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	56.9%	67.9%
Percentage panelists that scored the statement as not important	15.7%	11.3%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

RADIOLOGISTS:

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	66.7%	66.7%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

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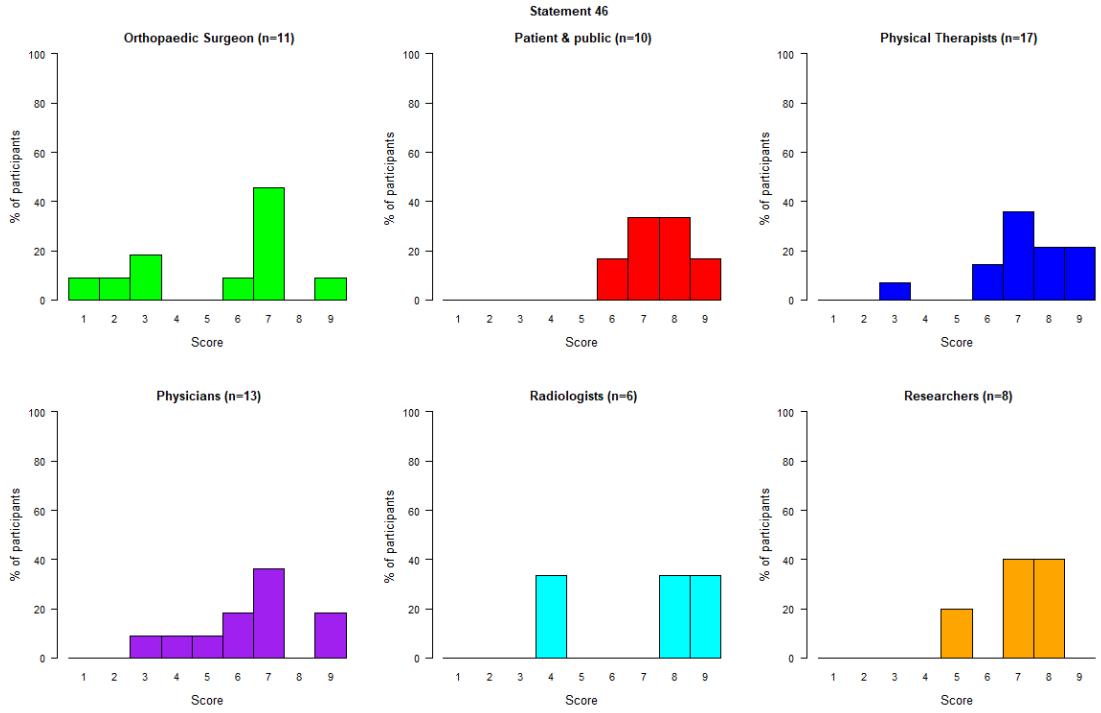

Statement 46
Orthopaedic Surgeon (n=11)
Patient & public (n=10)
Physical Therapists (n=17)
Physicians (n=13)
Radiologists (n=6)
Researchers (n=8)
% of participants
Score

DEFINITIONS

Statement 1: Primary cam morphology develops during skeletal maturation as a normal physiological response to load

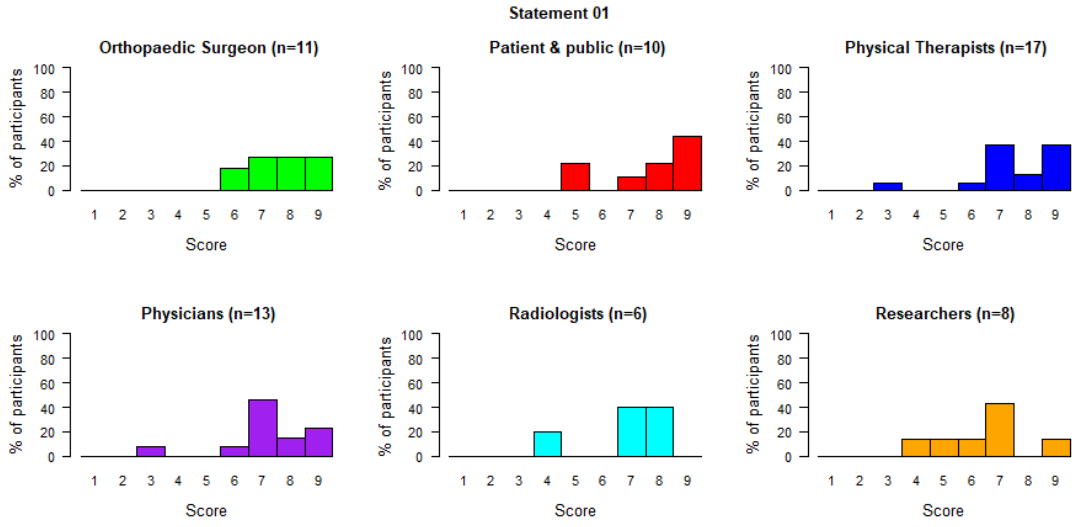
R1: CONSENSUS IN

R2: CONSENSUS IN

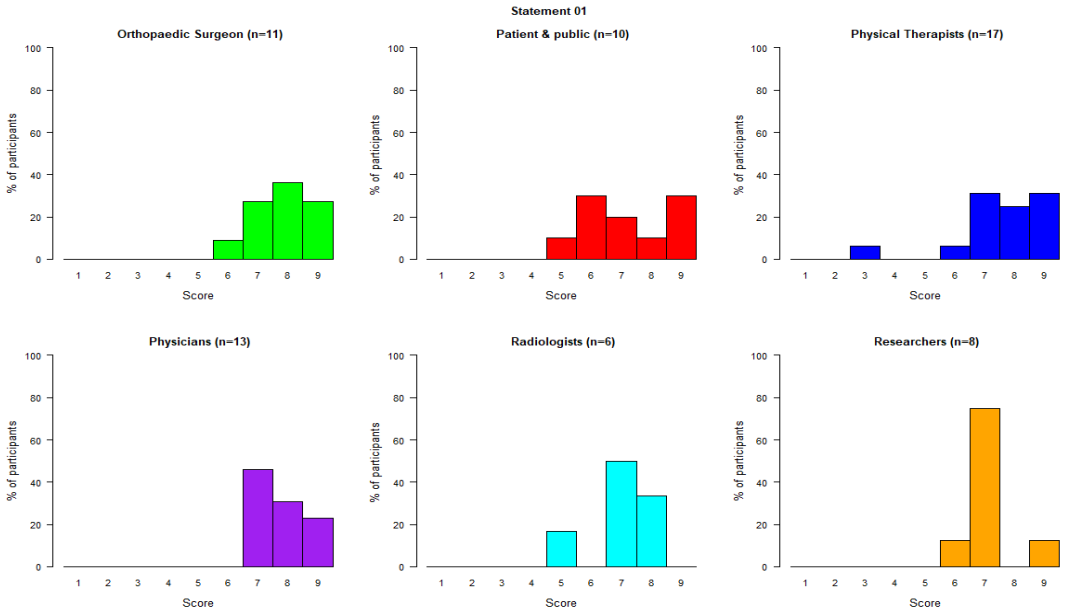
HELPTEXT from the Delphi repeated here for your convenience: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

1. I am in doubt whether to buy this concept?
2. My replies are made accepting the concept; but I feel it is twisting the idea of cam as the bony reaction during growth to include all kinds of malformations. Not sure how this concept will help us or be useful.
3. I would debate the term 'normal'; it's a physiological reaction but normal is questionable.
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. while I agree that CAM appears to occur during maturation as a response to load; whether this can be considered a normal response to load is more unclear.
6. not sure importance it the correct term to grade these statements; they are all important considerations
7. Genetics to be looked into as well



RESULTS ROUND 2:



Reasons for score boundary changes from R1 to R2

R1	R2	
3	7	I misunderstood the question - will elaborate in person
4	7	Actually very important to investigate further
5	7	I understand the group's feeling that this is an important component of defining primary cam morphology
4	7	Initial misunderstanding of the purpose of the statement

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	7	9	8	7	9
Patient & Public In	8	7	9	7	6	9
Physical Therapists	8	7	9	8	7	9
Physicians	7	7	8	8	7	8
Radiologists	7	7	8	7	7	8
Researchers	7	5	7	7	7	7

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	80.3%	85.9%
Percentage panelists that scored the statement as not important	3.3%	1.6%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 2: Primary cam morphology is not caused by previous disease, injury or an acute event; it represents a normal physiological response of the maturing skeleton to load

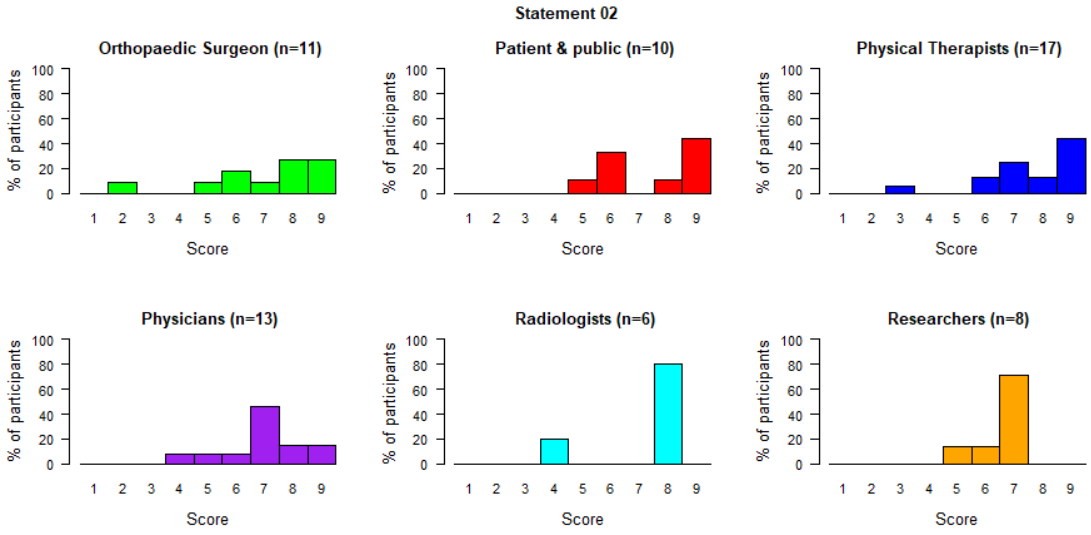
R1: CONSENSUS IN

R2: CONSENSUS IN

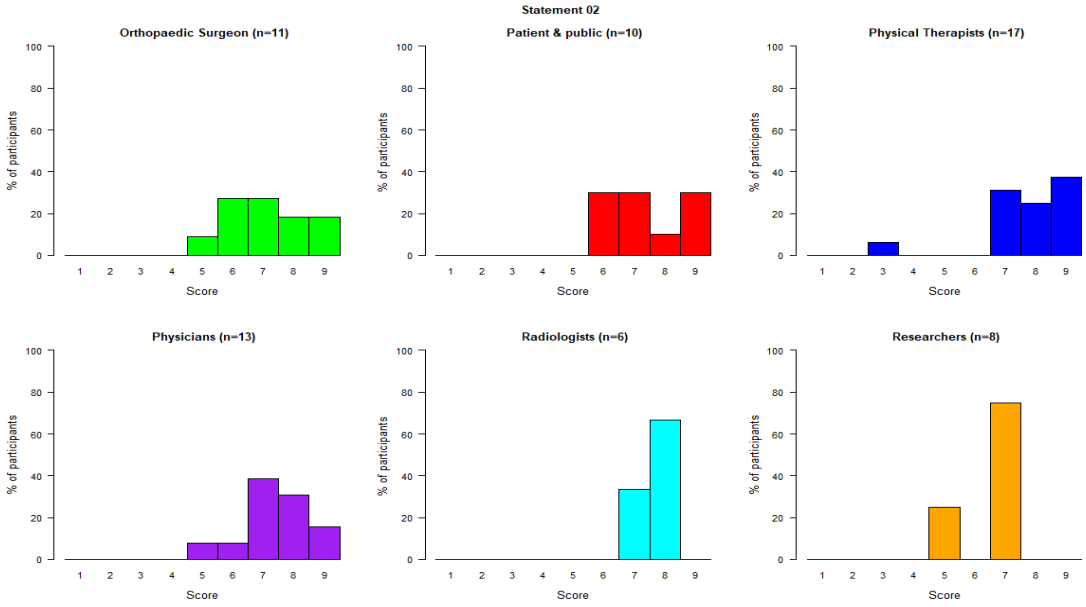
HELPTEXT: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

1. I feel this supersedes statement one.
2. I don't agree with a normal physiological response to 'load'. Itsn't it overload? And can we then still call it a physiological response?
3. Not caused by previous disease seems to be a critical distinction of primary cam morphology
4. The same. I would debate the term 'normal'; it's a physiological reaction but normal is questionable.
5. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
6. again the use of "normal" response to load; reduces my agreement
7. May be genetic



RESULTS: ROUND 2



Reasons for score boundary changes from R1 to R2

R1	R2	
6	7	Relevant that cam morphology is normal.
6	7	It is important for patients to know this.
2	5	Can occur due to SCFE or other etiologies
4	7	As above
4	7	Initial misunderstanding of the purpose of the statement
10	5	Felt more confident in being able to answer question

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	6	9	7	6	8
Patient & Public In	8	6	9	7	6	9
Physical Therapists	8	7	9	8	7	9
Physicians	7	7	8	7	7	8
Radiologists	8	8	8	8	7	8
Researchers	7	6	7	7	6	7

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	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	72.1%	81.3%
Percentage panelists that scored the statement as not important	3.3%	1.6%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

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Statement 3: Secondary cam morphology develops due to existing hip disease or acute trauma, including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture

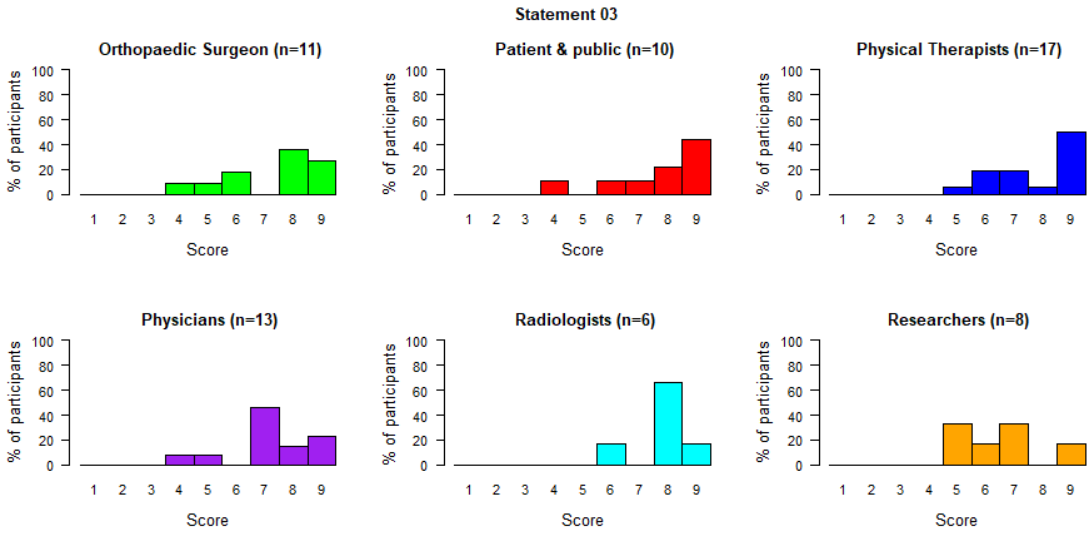
R1: CONSENSUS IN

R2: CONSENSUS IN

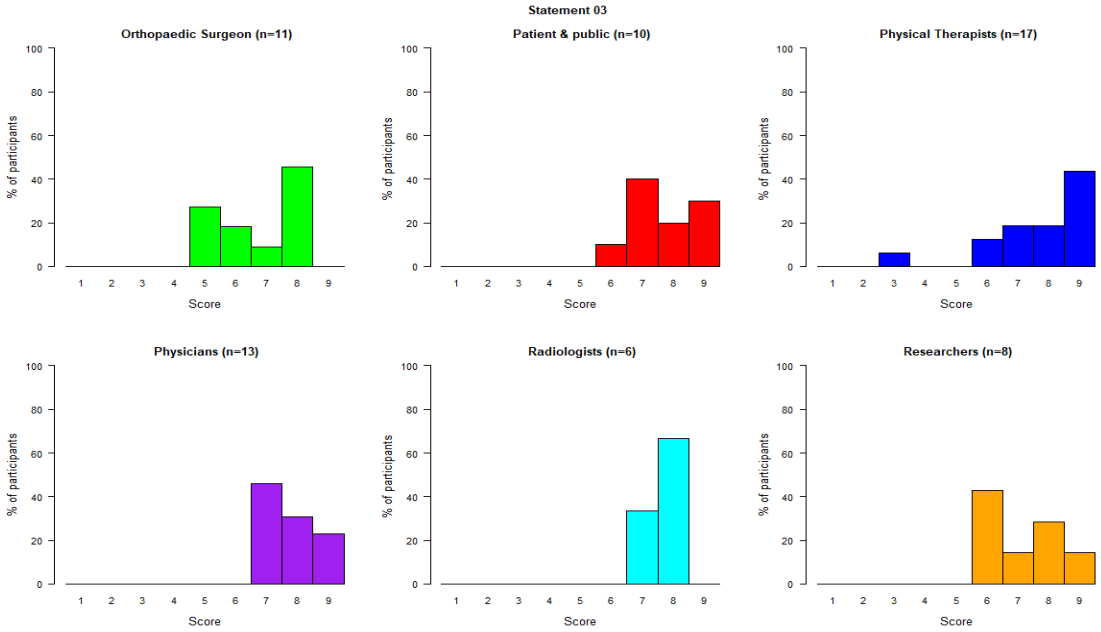
HELPTEXT: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

I do not agree that the concept of Primary and secondary CAM is commonly agreed and established



RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	7	Reflecting on it; understanding how secondary is different from primary is important.
5	7	First round I thought it was common knowledge. I now followed the lead of orthopedics and physicians
6	7	reviewed other responses
4	7	As above
6	7	At first I thought that secondary cam morphology is that rare that's not really important; but it can ben be some individuals.
9	3	I think the statement should remove the word “normal”. It seems that specific types of loading influence the development of a cam morphology. As we do not know details of which loads are key in this regard; the use of normal response to load may not be accurate. I would agree with the statement: “Primary cam morphology develops during skeletal maturation as a physiological response to load” or “Primary cam morphology develops during skeletal maturation as a physiological response to specific types of load”.

Median, IQR

	ROUND 1			ROUND 2		
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75

Orthopaedic Surgeon	8	6	9	7	5	8
Patient & Public In	8	7	9	8	7	9
Physical Therapists	9	7	9	8	7	9
Physicians	7	7	8	8	7	8
Radiologists	8	8	8	8	7	8
Researchers	7	5	7	7	6	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	73.8%	81%
Percentage panelists that scored the statement as not important	0%	1.6%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 4: Primary cam morphology develops in young and active individuals, including athletes, likely due to load (e.g., sporting activity) during prepubertal and pubertal skeletal maturation (load during growth) and its (physiological) effect on the proximal femoral growth plate

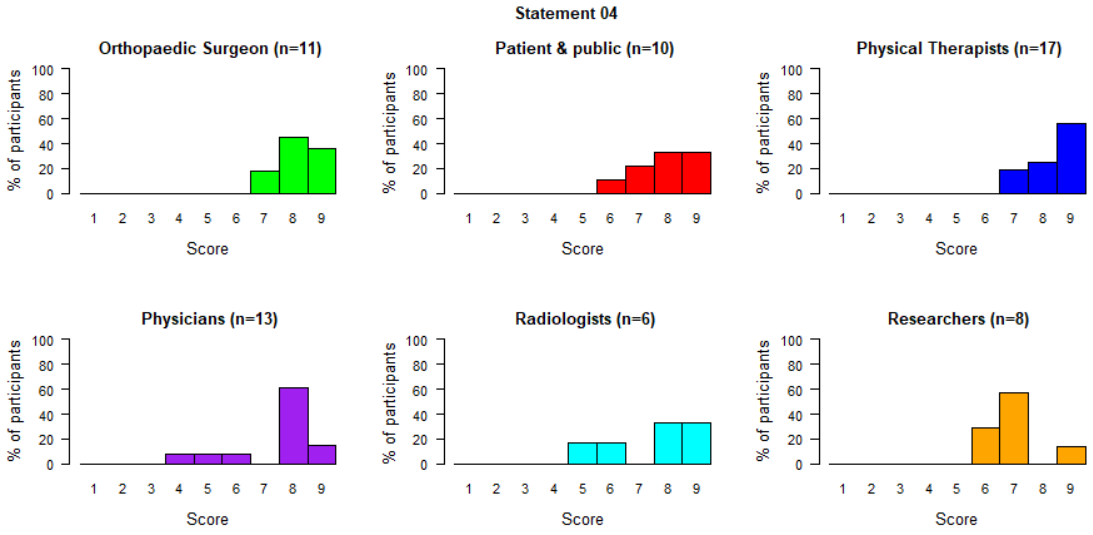
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: Skeletal maturation is the process of tissue change from the embryonic beginning of bone to the adult form. Puberty is the period during which growing boys or girls undergo the process of sexual maturation. A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

1. And this supersedes statement two.
2. This statement seems more appropriate than the one beneath it
3. Specify more common in males so the next statement can be removed
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established

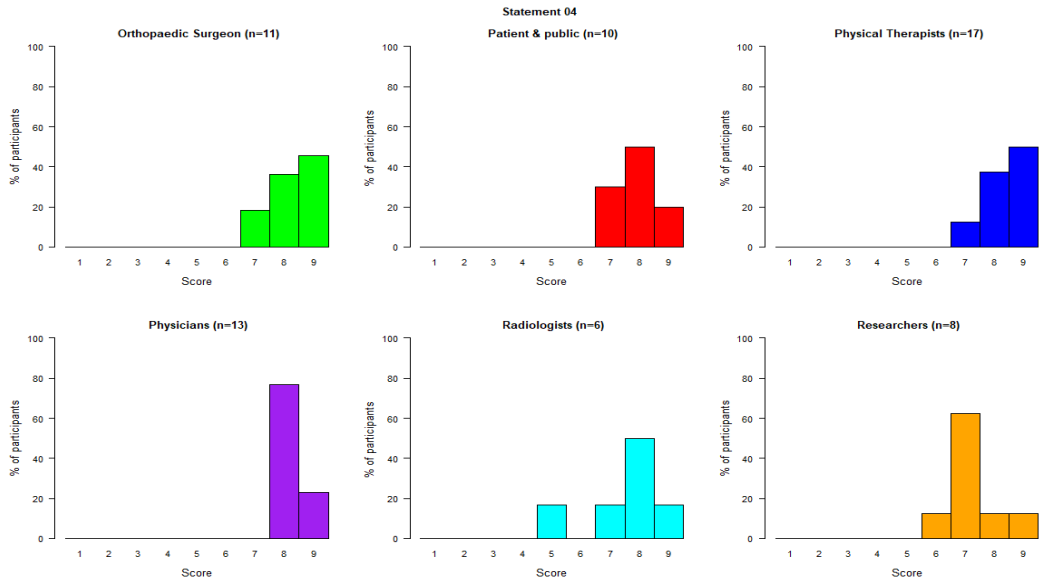


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	8	9
Patient & Public In	8	7	9
Physical Therapists	9	8	9
Physicians	8	8	8
Radiologists	8	6	9

Researchers	7	6	7

Percentage panelists that scored the statement as critical	87.1%
Percentage panelists that scored the statement as not important	0%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes

R1	R2	
4	8	I misunderstood the question - will elaborate in person
6	7	This is a stronger statement than some of the others focusing on males.
6	8	calibration from the other disciplines
6	7	Initial misunderstanding of the purpose of the statement

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	8	9	8	8	9
Patient & Public In	8	7	9	8	7	8
Physical Therapists	9	8	9	9	8	9
Physicians	8	8	8	8	8	8
Radiologists	8	6	9	8	7	8
Researchers	7	6	7	7	7	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	87.1%	96.9%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 5: Primary cam morphology is common in young and active males, including athletes, likely due to sporting activity during prepubertal and pubertal skeletal maturation (load during growth) and its (physiological) effect on the proximal femoral growth plate

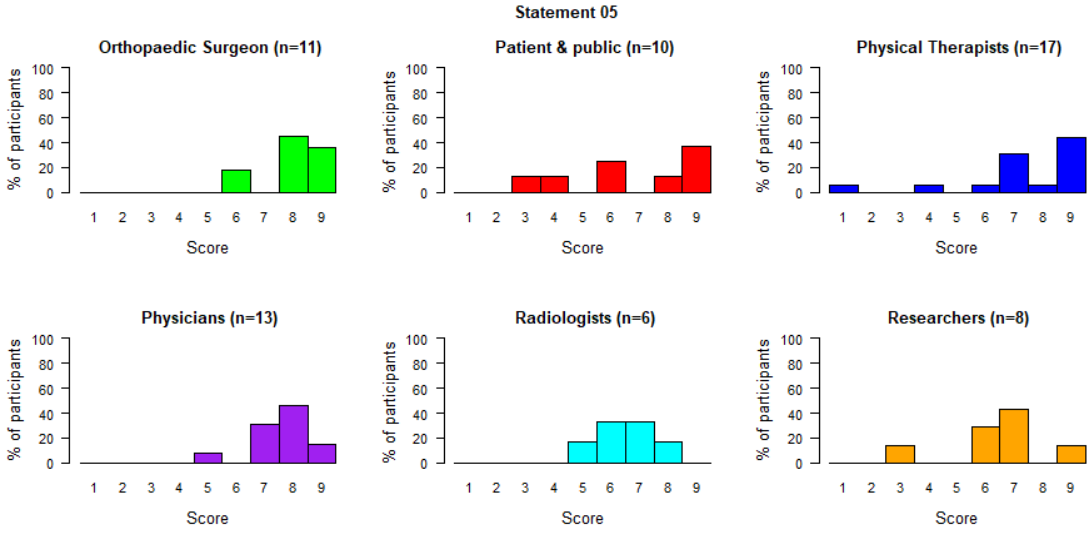
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: Skeletal maturation is the process of tissue change from the embryonic beginning of bone to the adult form. Puberty is the period during which growing boys or girls undergo the process of sexual maturation. A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

1. I don't think we know enough about females to make it categorical that it more frequently occurs in males and therefore would make this differentiation a lower priority i.e. not critical
2. is this because more males are playing sports with higher loading?
3. Is it proportionally just as prevalent in females?
4. This statement suggests PCM occurs only/mostly in males but I am not sure if that is the case. I thought it occurs in both sexes.
5. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
6. It is common in males; but I would argue that it's mainly bc we've looked at historically male sports (American football; ice hockey; wrestling)

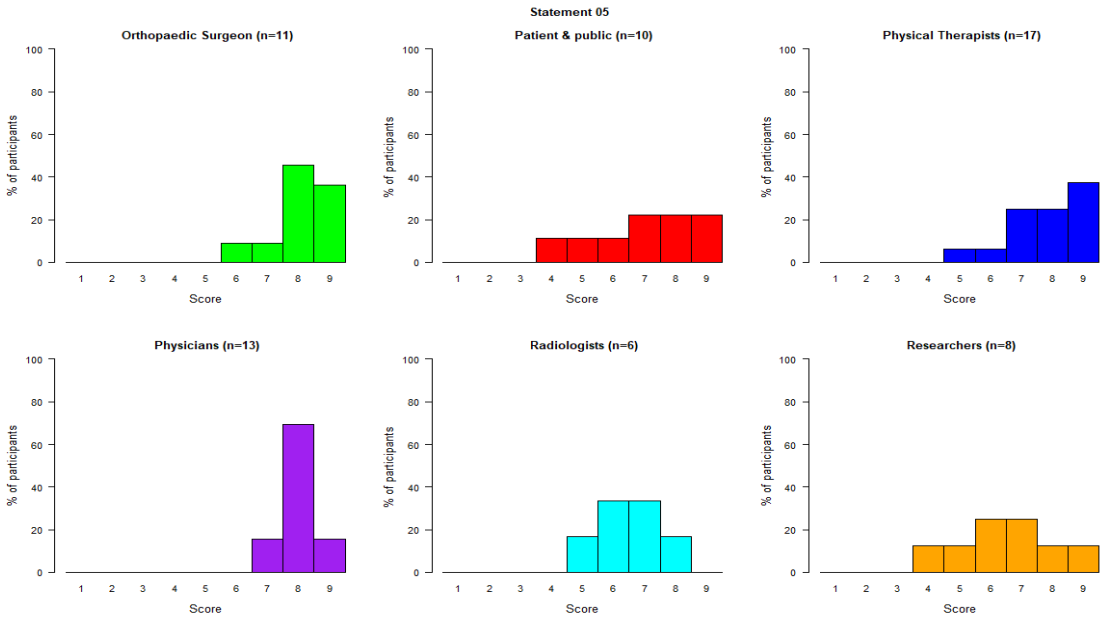


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	8	9
Patient & Public In	7	5	9

Physical Therapists	8	7	9
Physicians	8	7	8
Radiologists	7	6	7
Researchers	7	6	7

Percentage panelists that scored the statement as critical	73.8%
Percentage panelists that scored the statement as not important	4.9%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes

R1	R2	
6	8	Strengthened belief in statement
6	7	Small (1 point change) isn't too large; but our recent research on young athletes in our pediatric population tend to make me thing this is more important than my first answer.
6	7	Reviewing the statement I felt it was more important
5	8	I misunderstood the question - will elaborate in person
3	4	I struggle with this statement because I Believe there to be a paucity of research in females.
10	5	Felt more confident in being able to answer question

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	8	9	8	8	9
Patient & Public In	7	5	9	7	6	8
Physical Therapists	8	7	9	8	7	9
Physicians	8	7	8	8	8	8
Radiologists	7	6	7	7	6	7
Researchers	7	6	7	7	6	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	73.8%	79.4%
Percentage panelists that scored the statement as not important	4.9%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 6: Primary cam morphology includes cam morphology of unknown origin

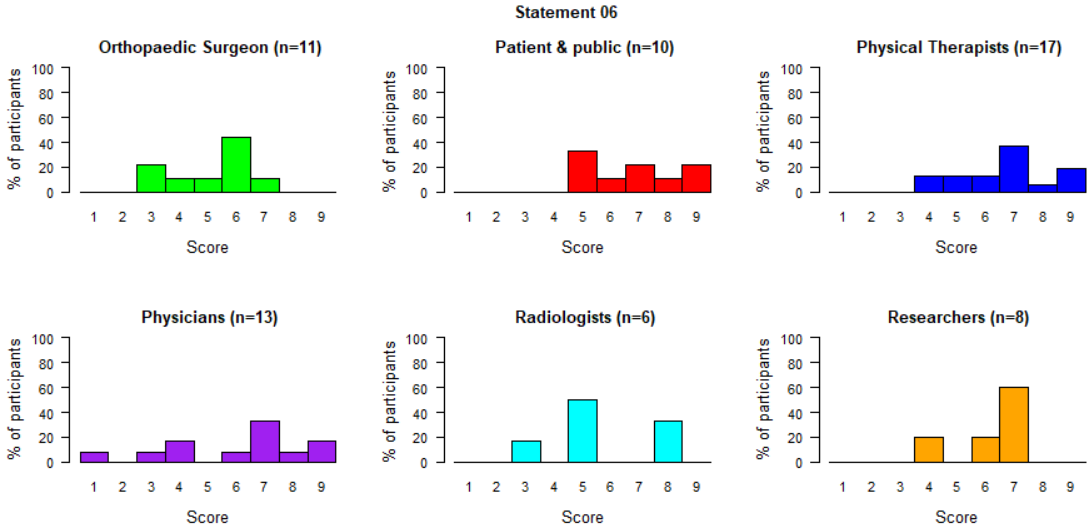
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture. Skeletal maturation is the process of tissue change from the embryonic beginning of bone to the adult form. Puberty is the period during which growing boys or girls undergo the process of sexual maturation.

RESULTS: ROUND 1

1. why then call it primary cam and not just cam morphology? Decades ago they proposed the same for osteoarthritis (primary and secondary) but hardly anybody uses these terms because the actual cause is simply often unknown.
2. I am not sure if my scoring here is realistic. We have good knowledge about pathogenesis at this stage but may be not enough
3. if its unknown i find it hard to know if primary or secondary
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. So primary cam morphology is every cam morphology which cannot be explained by a well defined trauma/pre existing condition

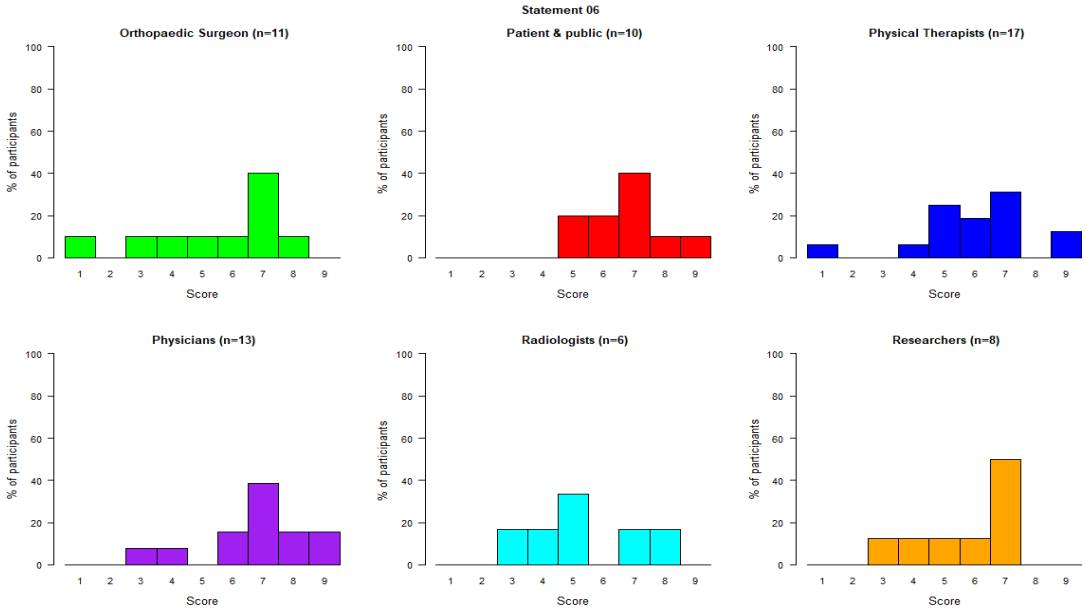


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	4	6
Patient & Public In	7	5	8
Physical Therapists	7	6	8

Physicians	7	4	8
Radiologists	5	5	8
Researchers	7	6	7

Percentage panelists that scored the statement as critical	49.1%
Percentage panelists that scored the statement as not important	8.8%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	9	changed my mind on the umbrella tern including unknown
3	8	Primary CAM can include those of unknown origin
4	7	I misunderstood the question - will elaborate in person
3	4	Statement is to short; but changed it to get in range with others
7	1	I misread the question initially
10	1	I do not understand the concept sufficiently
10	3	Felt more confident in being able to answer question
5	3	Disagree as the origin is not entirely "unknown" - likely due to variable loading demands.
10	6	seeing how my colleagues scored

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	6	4	6	7	4	7
Patient & Public In	7	5	8	7	6	7
Physical Therapists	7	6	8	6	5	7
Physicians	7	4	8	7	6	8
Radiologists	5	5	8	5	4	7
Researchers	7	6	7	7	5	7

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	49.1%	52.4%
Percentage panelists that scored the statement as not important	8.8%	9.5%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 7: Cam morphology that develops in young and active individuals without any symptoms (e.g., hip-related pain; stiffness) or history of previous/existing hip disease, is primary cam morphology until proven otherwise

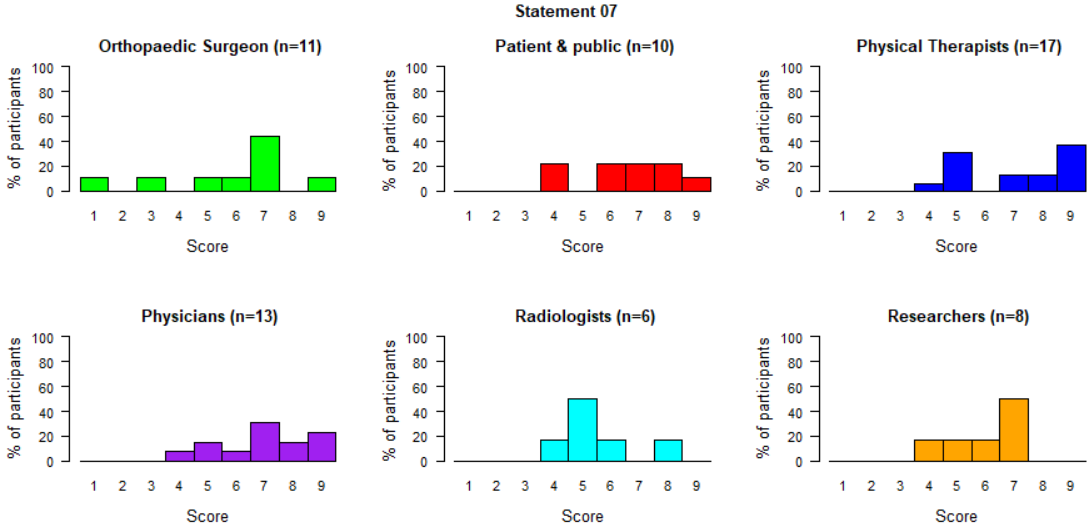
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

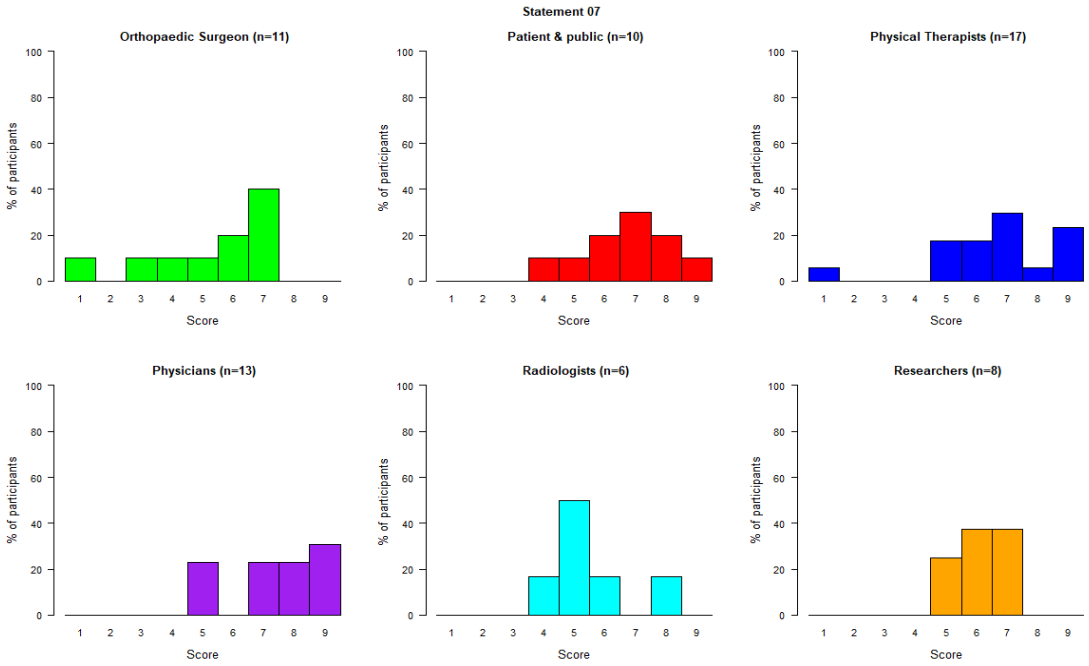
I do not agree that the concept of Primary and secondary CAM is commonly agreed and established



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	7
Patient & Public In	7	6	8
Physical Therapists	8	5	9
Physicians	7	6	8
Radiologists	5	5	6
Researchers	7	5	7

Percentage panelists that scored the statement as critical	55.9%
Percentage panelists that scored the statement as not important	3.4%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
4	8	I misunderstood the question - will elaborate in person
10	1	I do not understand the concept sufficiently
10	6	seeing how my colleagues scored
10	6	Felt more confident in being able to answer question

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	5	7	6	4	7
Patient & Public In	7	6	8	7	6	8
Physical Therapists	8	5	9	7	6	8
Physicians	7	6	8	8	7	9
Radiologists	5	5	6	5	5	6
Researchers	7	5	7	6	6	7

	Round 1	**Round 2**

Percentage panelists that scored the statement as critical	55.9%	53.1%
Percentage panelists that scored the statement as not important	3.4%	4.7%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Statement 8: Cam morphology is a cartilage or bony prominence (bump) of varying size at any location around the femoral head-neck junction, which changes the shape of the femoral head from spherical to aspherical

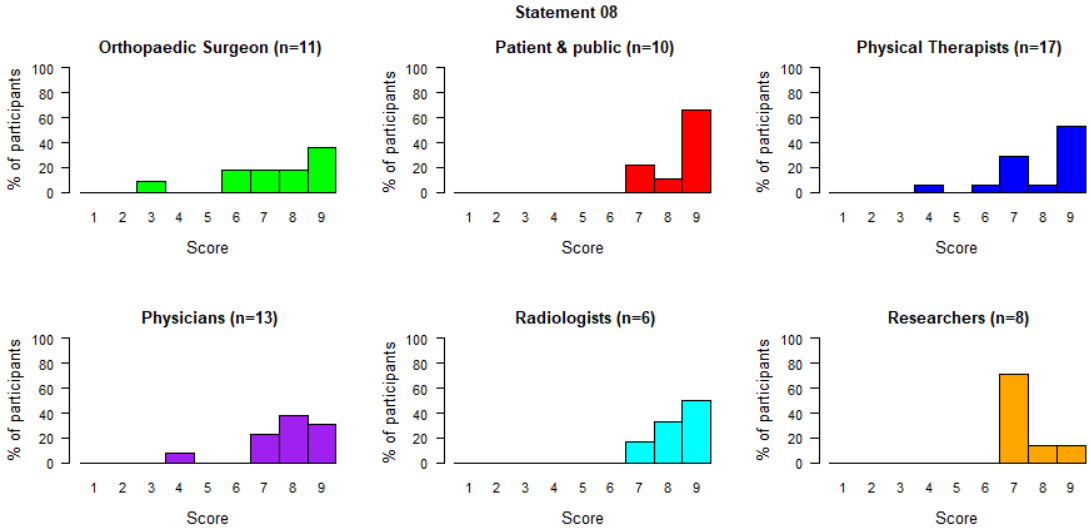
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: Palmer et al (2018) quantified cam morphology using the alpha angle (as described by Notzli et al, 2000) for bone and cartilage

RESULTS: ROUND 1

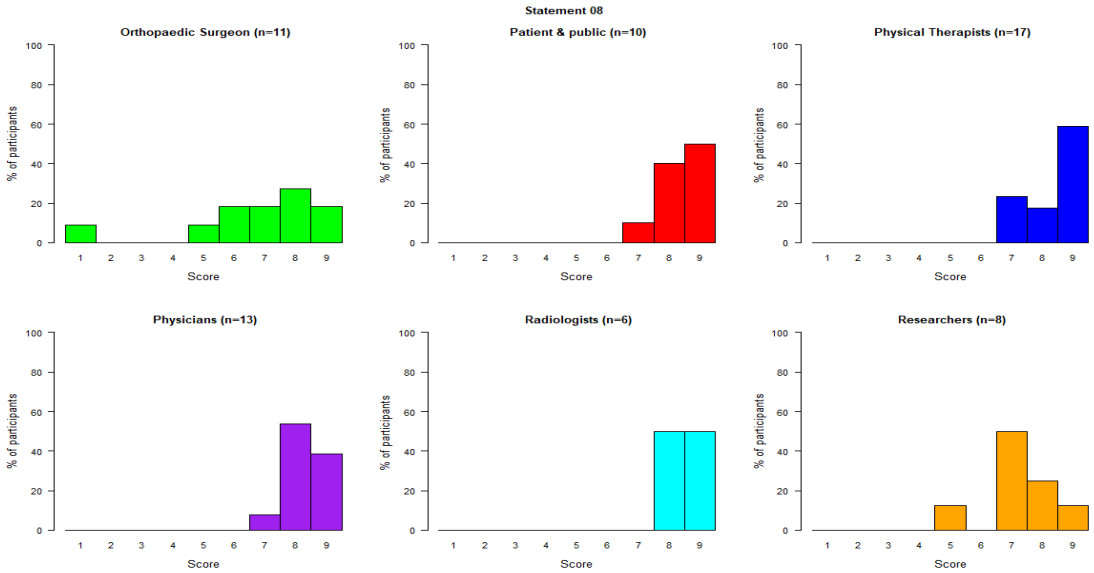
1. varying size but probably also varying shape
2. Agree is varying size at any location around the femoral head-neck junction as seen in many studies. We know about various locations as per Siebenrock 2011. More lately Hanzlik et all 2020 reported that affecting mainly Antero-superior quadrant ; following by Anteroinferior and no morphologies in the Posteorsuperior or Posteroiferior
3. Umbrella definition of primary cam morphology
4. 'Any location' suggests equal occurrence in all locations but I understood it predominantly occurs at superior/anterior.
5. Consider removing bump



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	6	9
Patient & Public In	9	8	9
Physical Therapists	9	7	9
Physicians	8	7	9
Radiologists	9	8	9
Researchers	7	7	8

Percentage panelists that scored the statement as critical	90.5%
Percentage panelists that scored the statement as not important	1.6%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	5	My initial answer related to an issue with the word "cartilage or bony". That said; it probably doesn't make the statement as low as I initially answered. The prominence is important in either case.
4	8	I misunderstood the question - will elaborate in person
9	1	any location is not true IMO
10	5	Felt more confident in being able to answer question

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	6	9	7	6	8
Patient & Public In	9	8	9	9	8	9
Physical Therapists	9	7	9	9	8	9
Physicians	8	7	9	8	8	9

Radiologists	9	8	9	9	8	9	
Researchers	7	7	8	7	7	8	

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	90.5%	92.3%
Percentage panelists that scored the statement as not important	1.6%	1.5%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 9: Primary cam morphology often occurs in male athletes in both hips

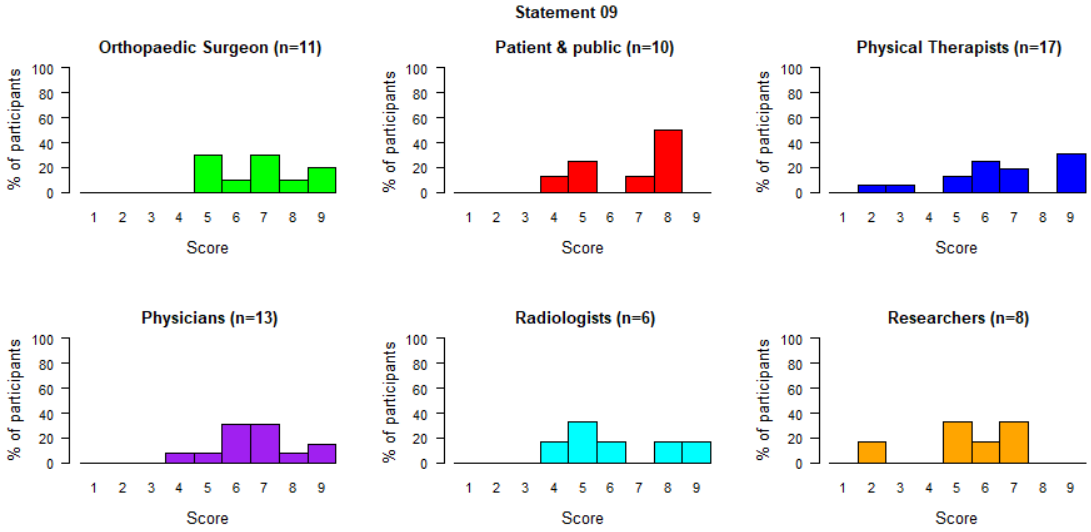
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Current scientific evidence summary: Primary cam morphology is more prevalent in male athletes vs female athletes. More research is needed in female athlete cohorts.

RESULTS: ROUND 1

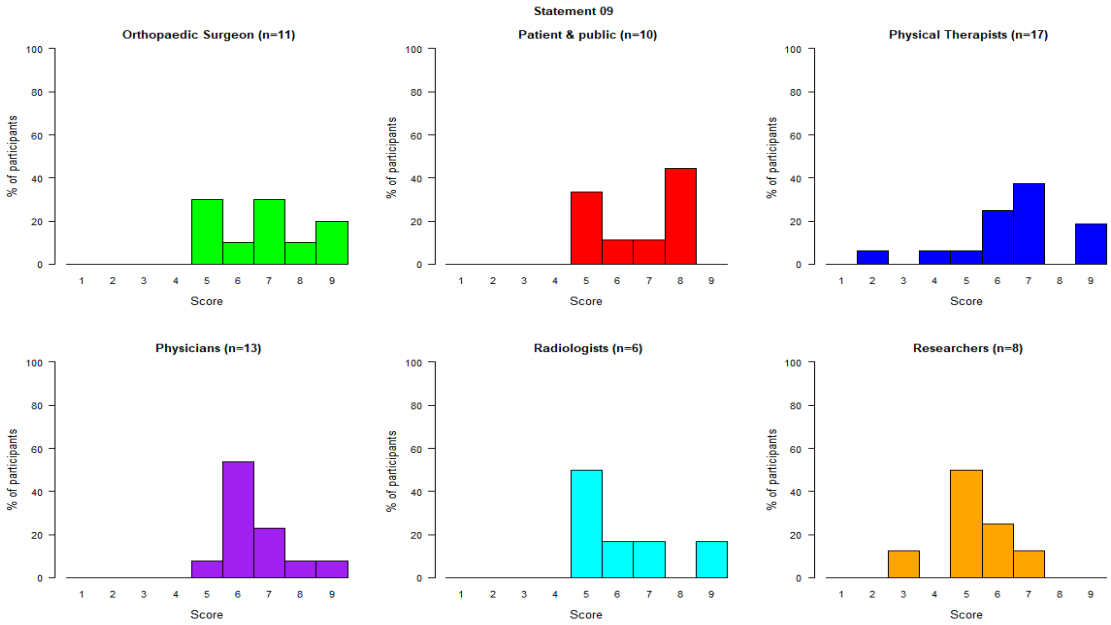
1. Isn't it 50-50? 50% bilateral and 50% unilateral. At least that mostly comes out of our studies; not sure by hard if other studies show differently
2. We know the prevalence in males and bilateral appearance. The only reason I cannot score this is I am not sure if I can comment on demographics and population as we do know that most of the studies include mainly male participants. From many conversations in different podiums (conferences; webinars. BGP meeting) recently this was raised and extensively discussed
3. From my understanding; there is a paucity of research in females. This doesn't seem like an appropriate statement at this point in time
4. This suggests it is uncommon in females and in one hip only but those two things may not be the case.
5. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
6. seen in top athletes (ice hockey goaltenders); but maybe it was "unilateral secondary cam morph."?
7. See comment above - females often left out of research.



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	8
Patient & Public In	8	5	8
Physical Therapists	7	6	9
Physicians	7	6	7
Radiologists	6	5	8

Researchers	6	5	7	
Percentage panelists that scored the statement as critical				50.8%
Percentage panelists that scored the statement as not important				5.1%
RESULT				**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes

R1	R2	
6	7	Unrefutable so moved from mid category to high
6	7	Second webinar informations
10	6	seeing how my colleagues scored
10	5	Felt more confident in being able to answer question

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	5	8	7	5	8
Patient & Public In	8	5	8	7	5	8
Physical Therapists	7	6	9	7	6	7
Physicians	7	6	7	6	6	7

Radiologists	6	5	8	6	5	7
Researchers	6	5	7	5	5	6

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	50.8%	45.2%
Percentage panelists that scored the statement as not important	5.1%	3.2%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 10: The most common outcome measure for cam morphology is a cartilage or bone alpha angle as a dichotomised or continuous variable on radiographs, computed tomogram (CT) scans or magnetic resonance (MR) imaging, reported per hip, per person or both

R1: CONSENSUS IN

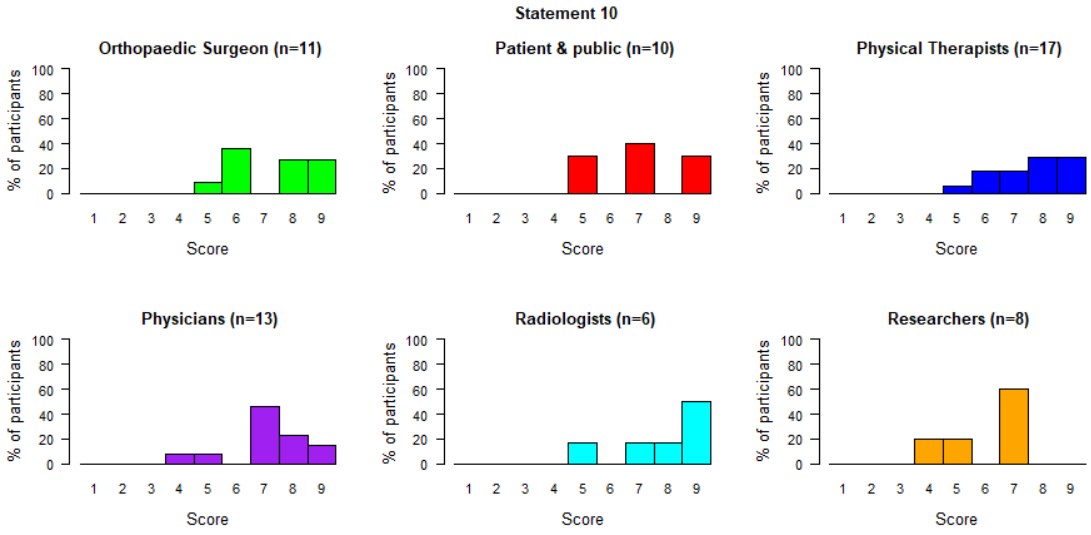
R2: CONSENSUS IN

HELPTEXT: Alpha angle definition (Notzle et al, 2000): Using the imaging sequence (or radiograph/CT), a circle is centred over the head of the femur and adjusted to its contour. The alpha angle is the angle between: (1) a line parallel to the femoral neck axis, and (2) a line from the centre of the femoral head to the point where the femoral head neck junction contour exceeds the head radius

Definitions

RESULTS: ROUND 1

methodological issues with treating AA as both dichotomised and continuous

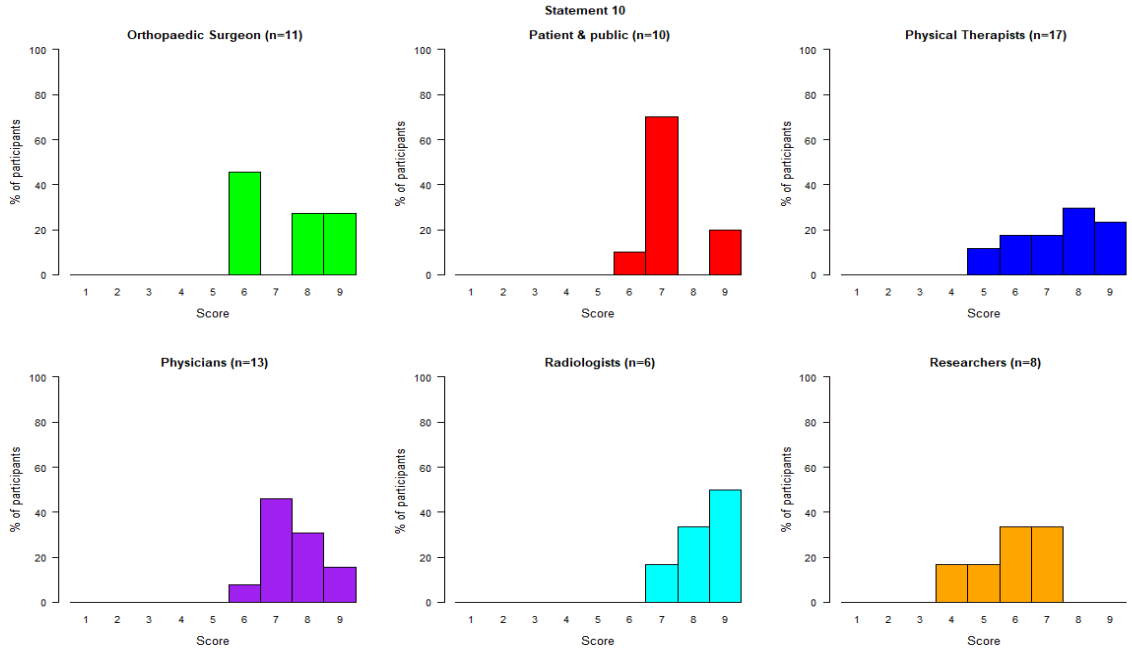


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	6	9
Patient & Public In	7	5	9
Physical Therapists	8	7	9
Physicians	7	7	8
Radiologists	9	7	9
Researchers	7	5	7

Percentage panelists that scored the statement as critical	72.6%
Percentage panelists that scored the statement as not important	0%

RESULT	CONSENSUS IN

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
5	7	I initially preferred to score this less important because of its inclusion of CT
4	7	I misunderstood the question - will elaborate in person
7	6	calibration from the other disciplines
10	4	Felt more confident in being able to answer question
7	6	Rethought the question and answer

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	6	9	8	6	9
Patient & Public In	7	5	9	7	7	7
Physical Therapists	8	7	9	8	6	8

Physicians	7	7	8	7	7	8
Radiologists	9	7	9	9	8	9
Researchers	7	5	7	6	5	7

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	72.6%	74.6%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 11: Primary cam morphology likely develops during maturation in young adolescents (with no current or previous hip disease), possibly due to high-load sporting activity and other unconfirmed risk factors

R1: CONSENSUS IN

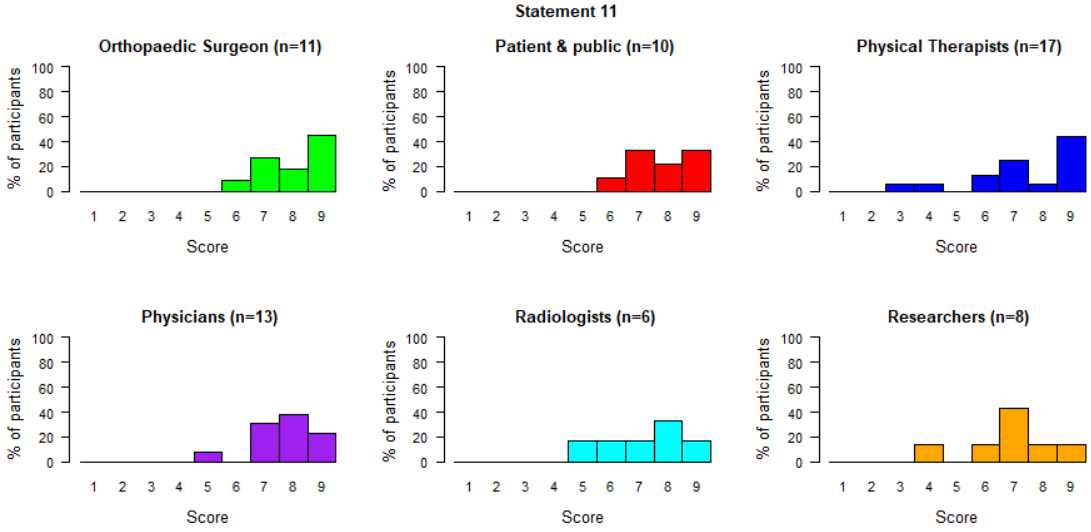
R2: CONSENSUS IN

Skeletal maturation is the process of tissue change from the embryonic beginning of bone to the adult form. Puberty is the period during which growing boys or girls undergo the process of sexual maturation. A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

Definitions

RESULTS: ROUND 1

1. Covered better in earlier statement
2. This seems to contradict item 4 above which is v clear; whereas this statement uses 'likely' and 'possibly' so leaves some ambiguity.
3. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
4. I do not disagree with this statement; but I believe the phrasing in the earlier statement is better (e.g. "likely" preferred over "possibly")
5. Again genetics cannot be overlooked

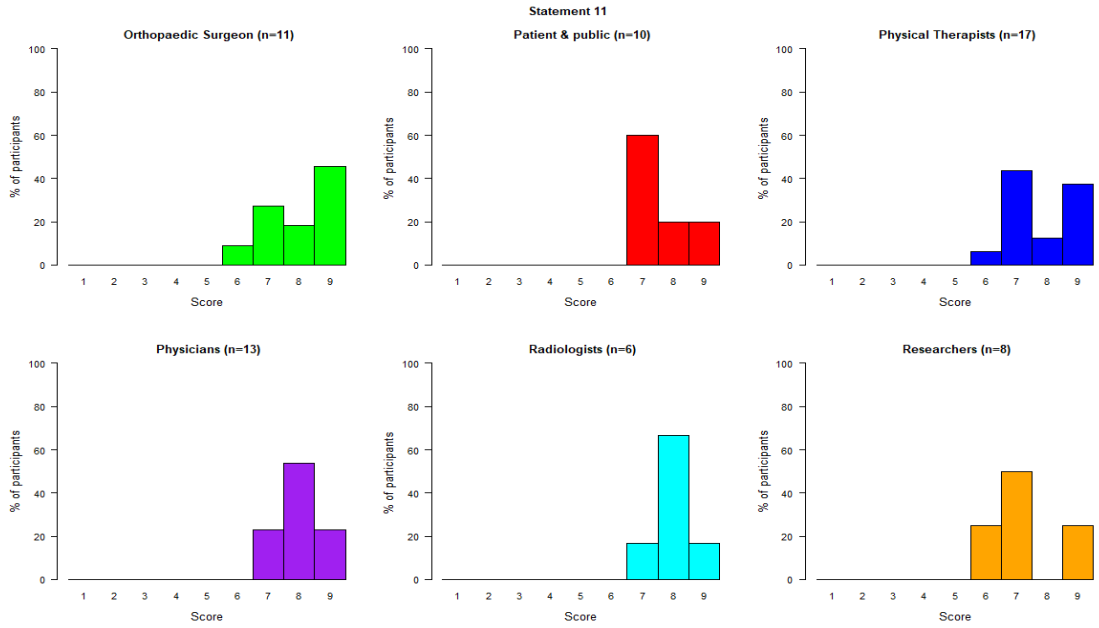


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	7	9
Patient & Public In	8	7	9
Physical Therapists	8	7	9
Physicians	8	7	8

Radiologists	8	6	8	
Researchers	7	6	8	

Percentage panelists that scored the statement as critical	82.3%
Percentage panelists that scored the statement as not important	1.6%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes

R1	R2	
3	7	NB mention high-load
6	8	Strengthened belief in statement
6	7	minor adjustment
5	7	I misunderstood the question - will elaborate in person
6	8	true on second thought more important

Median, IQR

	ROUND 1	ROUND 2

	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	7	9	8	7	9
Patient & Public In	8	7	9	7	7	8
Physical Therapists	8	7	9	8	7	9
Physicians	8	7	8	8	8	8
Radiologists	8	6	8	8	8	8
Researchers	7	6	8	7	7	8

	Round 1	Round 2
Percentage panelists that scored the statement as critical	82.3%	93.8%
Percentage panelists that scored the statement as not important	1.6%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 12: A comprehensive definition for primary cam morphology would be: Primary cam morphology is a cartilage or bony prominence (bump) of varying size at any location around the femoral head-neck junction, which changes the shape of the femoral head from spherical to aspherical. It often occurs in male athletes in both hips. The most common outcome measure is a cartilage or bone alpha angle as a dichotomised or continuous variable on radiographs, CT scans or MR imaging, reported per hip, per person or both. Primary cam morphology likely develops during maturation in young adolescents (with no current or previous hip disease), possibly due to high-load sporting activity and other unconfirmed risk factors.

R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: This definition is based on 5 conceptual attributes: (1) tissue type, (2) size, (3) location, (4) shape, and (5) ownership ('ownership' = who 'owns' primary cam morphology: common in male athletes in both hips). This is the current definition in a paper accepted for publication in BJSM: "Primary cam morphology; bump, burden or bog-standard? A concept analysis. Continuous outcome variables (like the alpha angle) should not be dichotomised in regression models of aetiology or prognosis. A dichotomised alpha angle might be useful in clinical practice and/or clinical research. Current scientific evidence summary: Primary cam morphology is more prevalent in male athletes vs female athletes. More research is needed in female athlete cohorts.

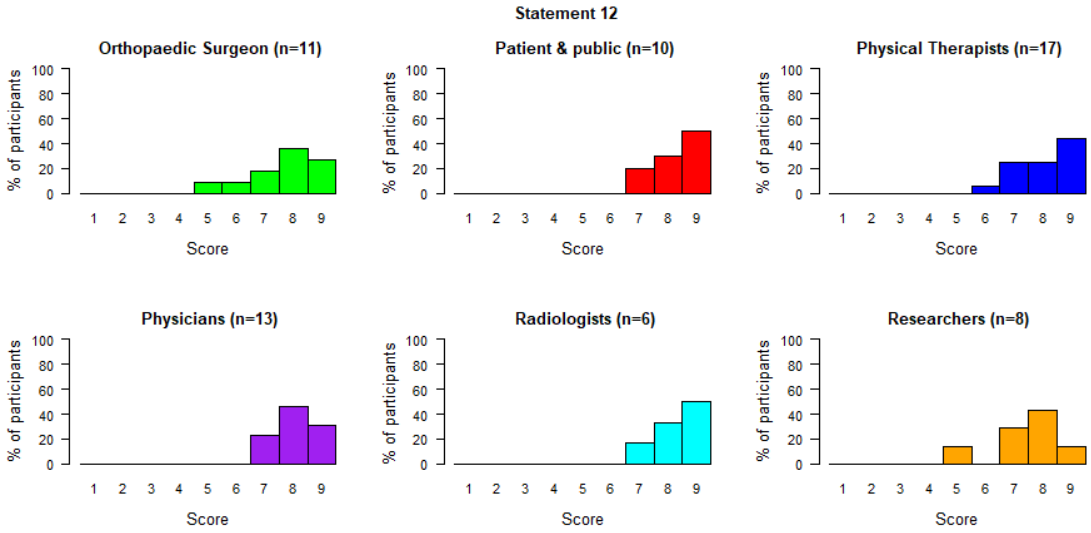
Definitions

RESULTS: ROUND 1

1. If this is a definition - I wouldn't have the text that says 'CT scans or MR imaging; reported per hip; per person or both.' I think it distracts the reader and we know that we need to measure the alpha angle - how we achieve that I am not sure needs to be in the overall definition.
2. see the bilateral aspect
3. I think the most common outcome measure part is better to be mentioned in taxonomy.
4. It often occurs in male athletes in both hips seems less relevant than that it occurs in young and active individuals. Instead of "the most common outcome measure..."; might consider something such as "It is often diagnosed using a cartilage or bone alpha angle on radiographs; CT scans....." Incorporation of "outcome measure" and "dichotomised or continuous variable" is really an operationalization of the definition.
5. maybe adding: During maturation in young adolescents when physyeal plate is not yet closed
6. Agree but see caveats above about 'any location' and 'males'.
7. I'm reacting to the suggestion that this is for "male athletes". Female athletes also have cam (and; when they do; have worse outcomes).
8. Consider removing bump
9. This is the definition of CAM morphology. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
10. I would prefer the last part to use the earlier phrasing "likely due to sporting activity during prepubertal and pubertal skeletal maturation (load during growth) and its (physiological) effect on the proximal femoral growth plate likely due to sporting activity during prepubertal and

pubertal skeletal maturation (load during growth) and its (physiological) effect on the proximal femoral growth plate "likely due to load (e.g. sporting activity) during prepubertal and pubertal skeletal maturation....

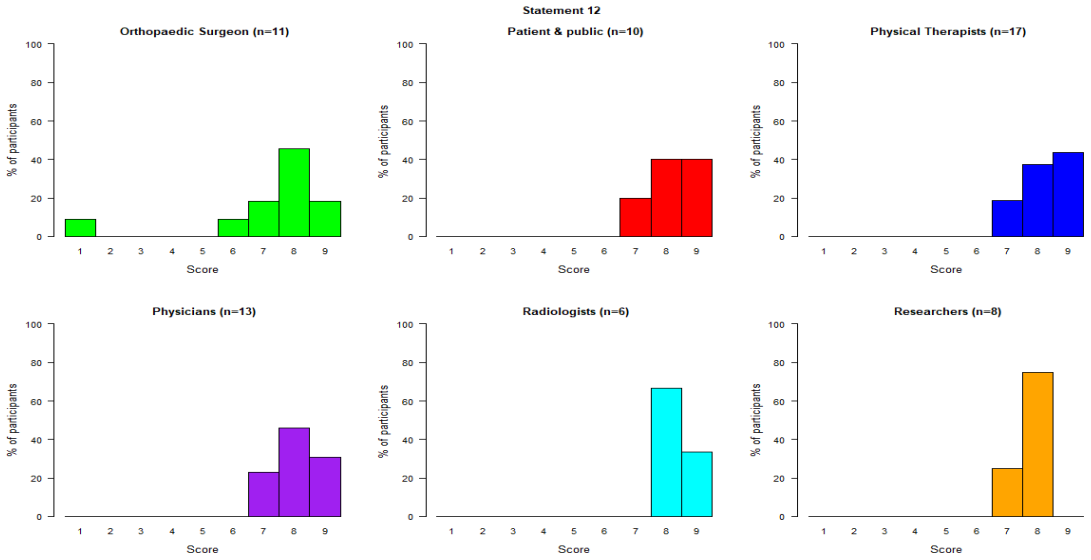
11. I would hesitate to include gender in the definition to avoid people thinking that it is a male-only problem
12. Would include a statement on genetic influences



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	7	9
Patient & Public In	9	8	9
Physical Therapists	8	7	9
Physicians	8	8	9
Radiologists	9	8	9
Researchers	8	7	8

Percentage panelists that scored the statement as critical	93.7%
Percentage panelists that scored the statement as not important	0%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	7	In second view it seems more critical to agree on a definition.
5	7	I don't like the phrasing "outcome measure" for the description of alpha angle; but in reading the rest of the definition I found it acceptable.
9	1	any location is not true IMO

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	7	9	8	7	8
Patient & Public In	9	8	9	8	8	9
Physical Therapists	8	7	9	8	8	9
Physicians	8	8	9	8	8	9
Radiologists	9	8	9	8	8	9
Researchers	8	7	8	8	8	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	93.7%	96.9%
Percentage panelists that scored the statement as not important	0%	1.6%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

TERMINOLOGY

Statement 13: Cam morphology is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

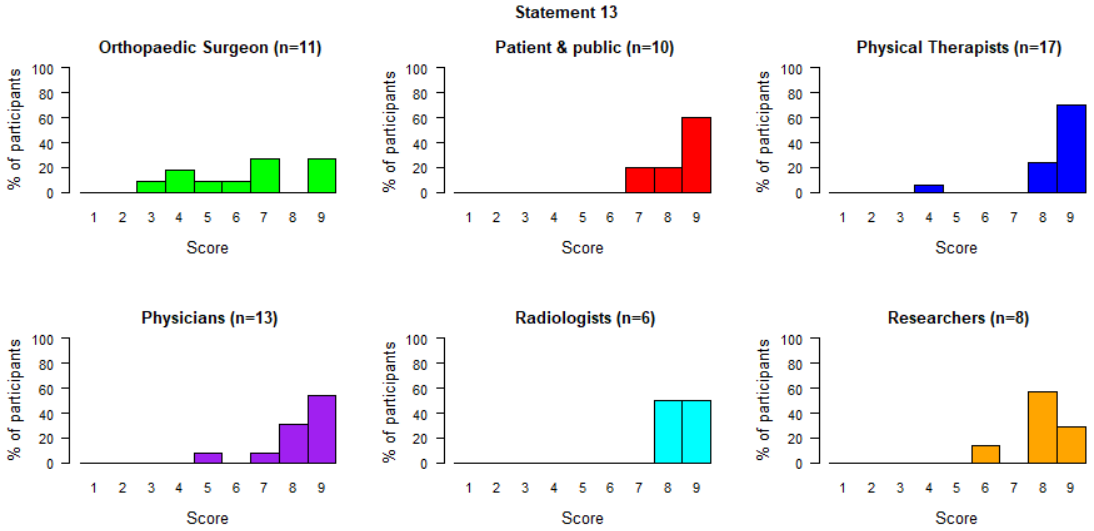
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology.

RESULTS: ROUND 1

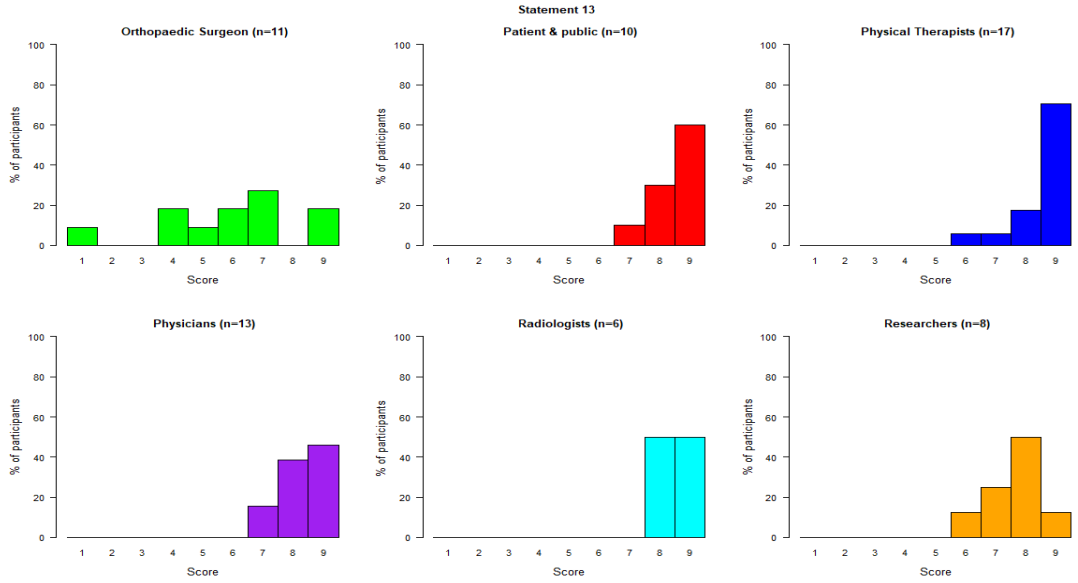
1. I prefer this one as we've agreed it is a 'normal physiological response' and therefore shouldn't be called a lesion/deformity with their connotations of abnormality.
2. consider replacing bump by prominence



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	4	9
Patient & Public In	9	8	9
Physical Therapists	9	8	9
Physicians	9	8	9
Radiologists	9	8	9
Researchers	8	8	9

Percentage panelists that scored the statement as critical	87.5%
Percentage panelists that scored the statement as not important	1.6%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	7	I think is probably necessary to provide a better definition and I moved above the cut off to be considered
9	1	any location is not true IMO
8	6	influenced by scores from other respondents

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	4	9	6	4	7
Patient & Public In	9	8	9	9	8	9
Physical Therapists	9	8	9	9	8	9
Physicians	9	8	9	8	8	9
Radiologists	9	8	9	9	8	9
Researchers	8	8	9	8	7	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	87.5%	87.7%
Percentage panelists that scored the statement as not important	1.6%	1.5%

RESULT	CONSENSUS IN	CONSENSUS IN

Statement 14: Cam lesion is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

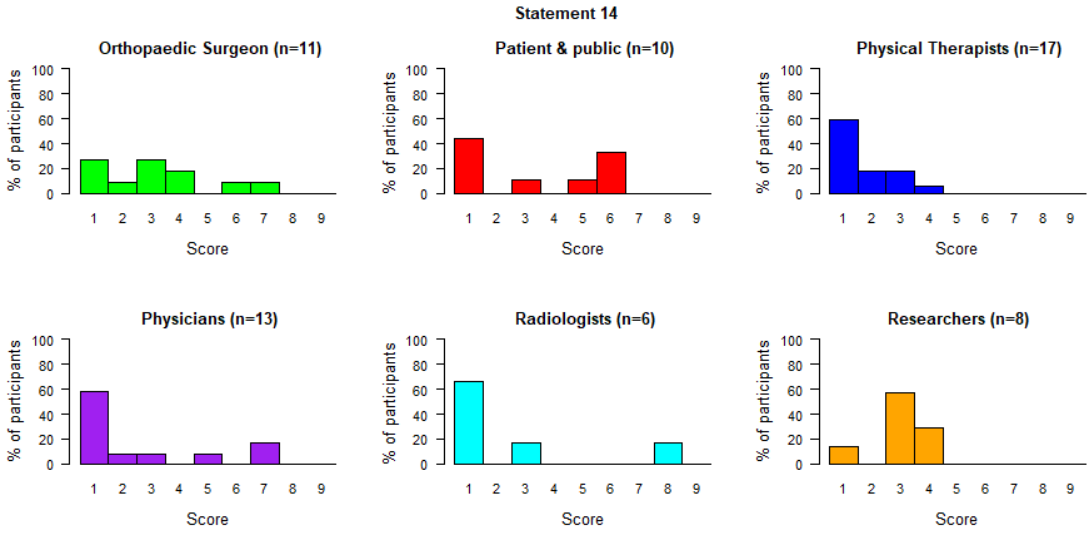
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology.

RESULTS: ROUND 1

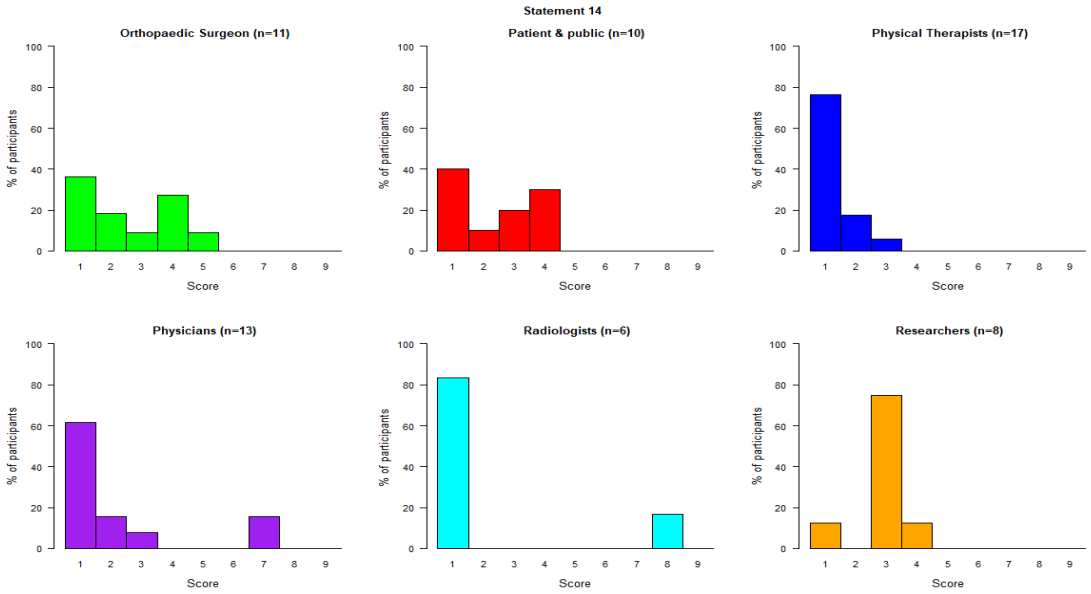
1. Add "is not" in place of "is". This will then be critical in all instances below; but is difficult to score as it currently stands. I therefore marked Unable to score.
2. Assuming that by "not important" you mean not in agreement with statement



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	3	1	4
Patient & Public In	3	1	6
Physical Therapists	1	1	2
Physicians	1	1	4
Radiologists	1	1	3
Researchers	3	3	4

Percentage panelists that scored the statement as critical	6.5%
Percentage panelists that scored the statement as not important	75.8%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary change between R1 and R2

R1	R2	
1	4	Can refer to CAM morphology
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc.
10	2	seeing how my colleagues scored
4	3	In comparing with other definitions; I did not prefer this one.

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	3	1	4	2	1	4
Patient & Public In	3	1	6	3	1	4
Physical Therapists	1	1	2	1	1	1
Physicians	1	1	4	1	1	2
Radiologists	1	1	3	1	1	1
Researchers	3	3	4	3	3	3

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	6.5%	4.6%
Percentage panelists that scored the statement as not important	75.8%	83.1%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 15: Cam deformity is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

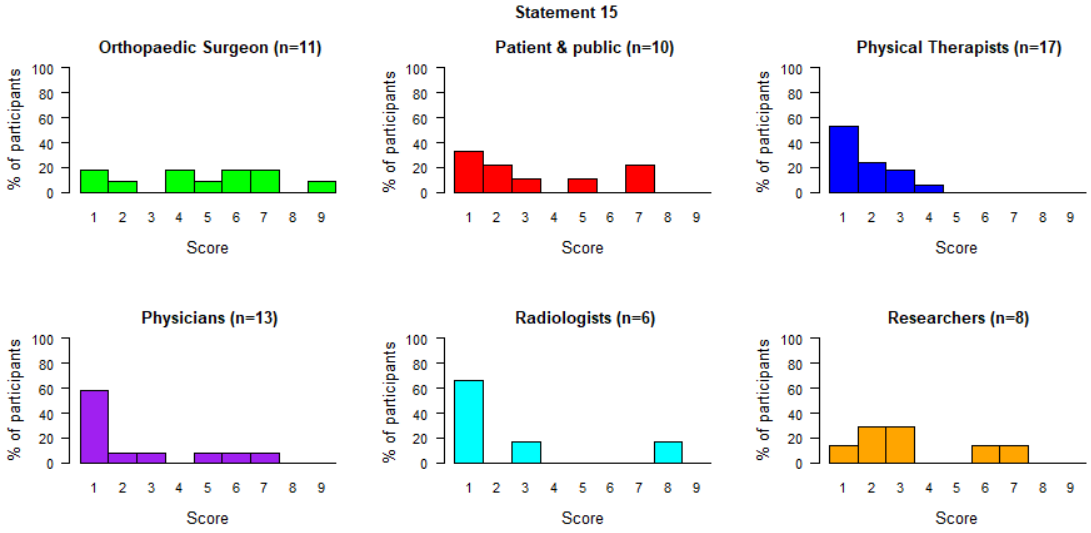
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

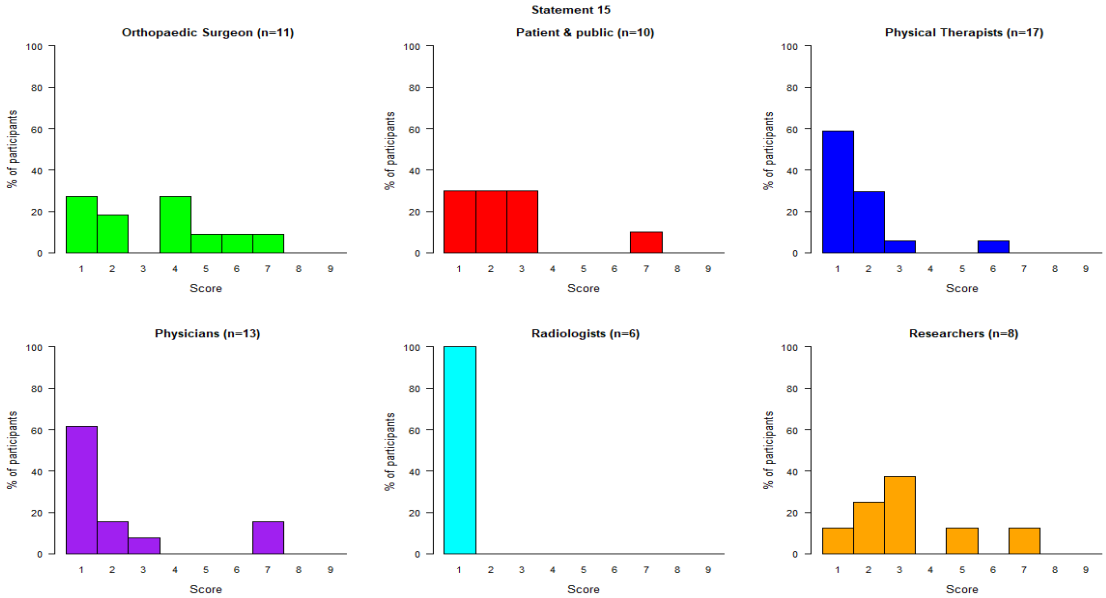
1. Add "is not" in place of "is"
2. agree with lecturer that deformity may not be the best term



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	5	2	7
Patient & Public In	2	1	5
Physical Therapists	1	1	2
Physicians	1	1	4
Radiologists	1	1	3
Researchers	3	2	6

Percentage panelists that scored the statement as critical	12.9%
Percentage panelists that scored the statement as not important	71%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
7	1	ditto and so on for all Q WITH "ANY LOCATION"
10	2	seeing how my colleagues scored

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	5	2	7	4	1	5
Patient & Public In	2	1	5	2	1	3
Physical Therapists	1	1	2	1	1	2
Physicians	1	1	4	1	1	2
Radiologists	1	1	3	1	1	1
Researchers	3	2	6	3	2	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	12.9%	7.7%

Percentage panelists that scored the statement as not important	71%	81.5%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Statement 16: Cam abnormality is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

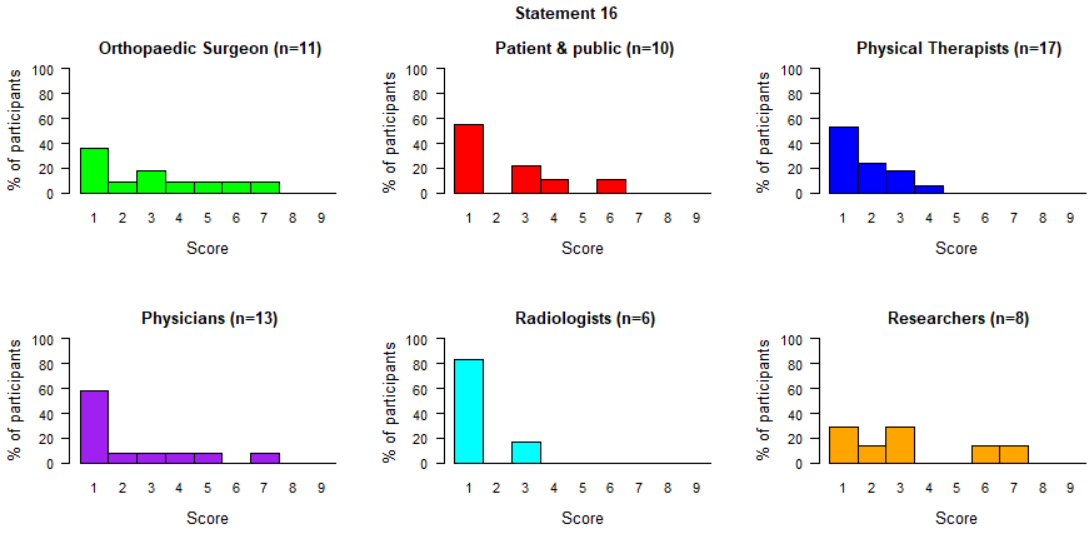
R1: CONSENUS OUT

R2: CONSENUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

1. Add "is not" in place of "is"
2. same with abnormality...not a very optimistic term

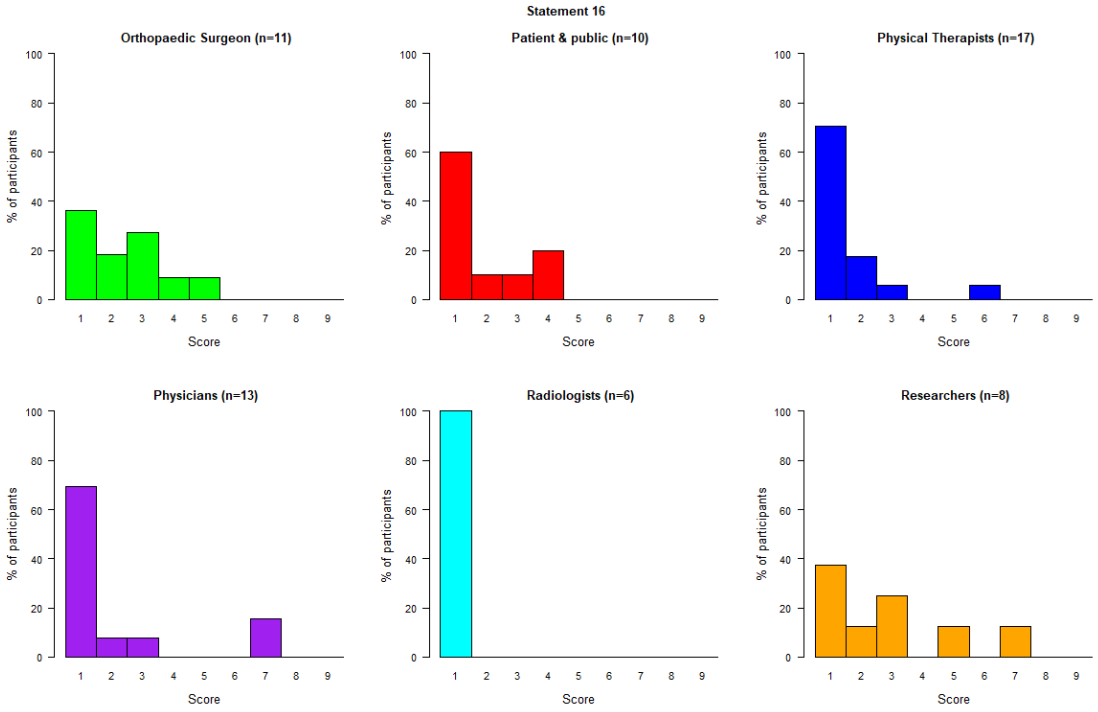


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	3	1	5
Patient & Public In	1	1	3
Physical Therapists	1	1	2
Physicians	1	1	4
Radiologists	1	1	1
Researchers	3	1	6

Percentage panelists that scored the statement as critical	4.8%
Percentage panelists that scored the statement as not important	80.6%

RESULT	CONSENSUS OUT

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	4	Can refer to CAM morphology
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	1	seeing how my colleagues scored
6	2	Global view and reading more in the literature

Median, IQR

	ROUND 1			ROUND 2		
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	3	1	5	2	1	3
Patient & Public In	1	1	3	1	1	3
Physical Therapists	1	1	2	1	1	2

Physicians	1	1	4	1	1	2
Radiologists	1	1	1	1	1	1
Researchers	3	1	6	3	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	4.8%	4.6%
Percentage panelists that scored the statement as not important	80.6%	86.2%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Statement 17: Cam-type deformity is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

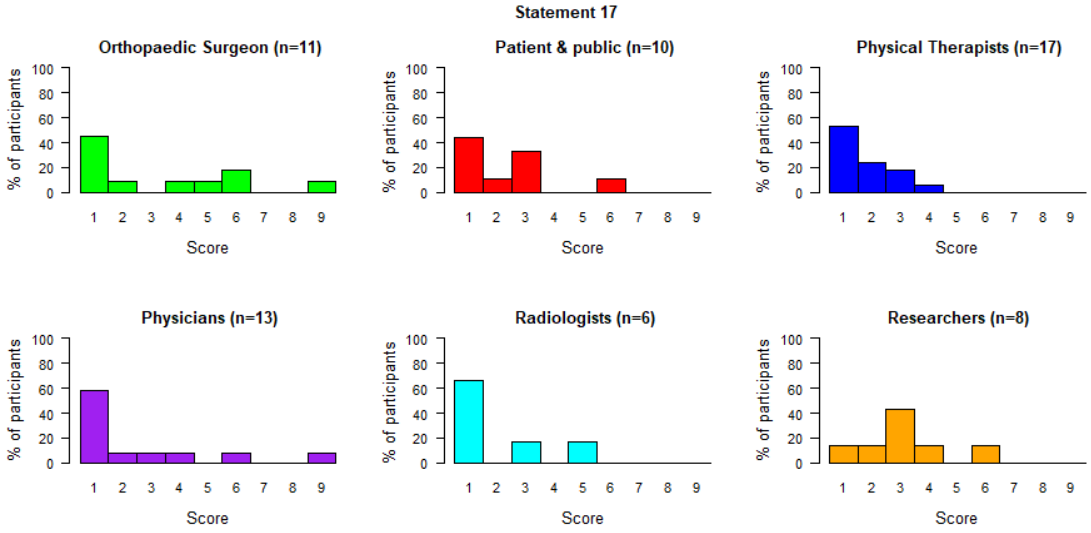
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

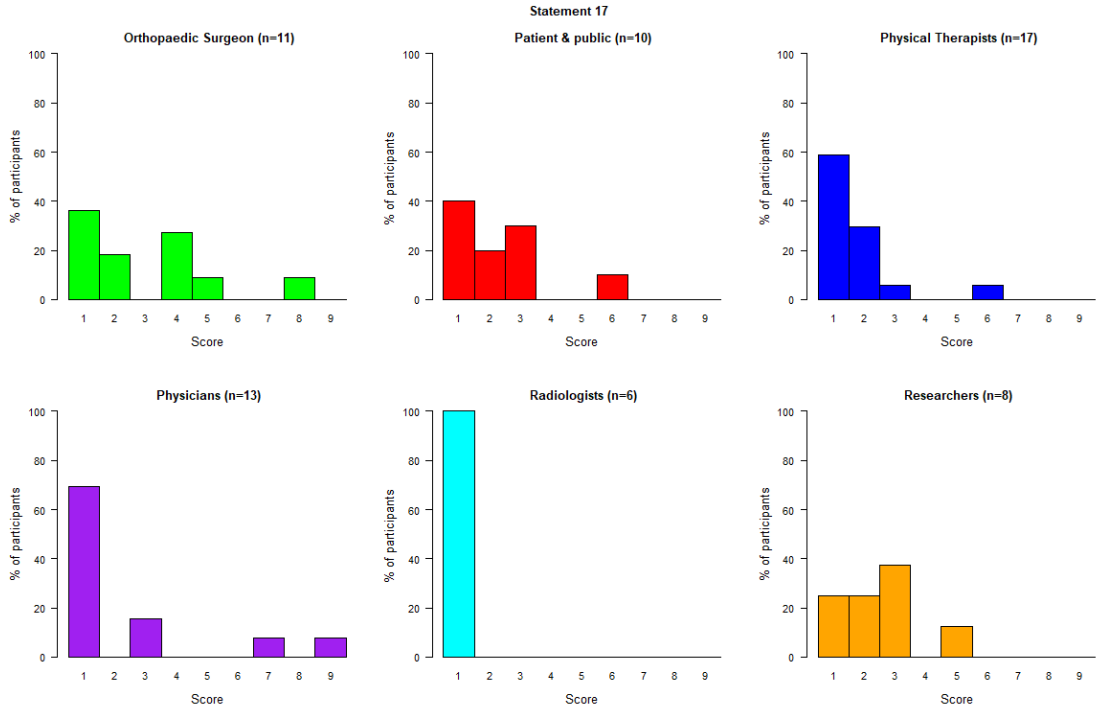
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	6
Patient & Public In	2	1	3
Physical Therapists	1	1	2
Physicians	1	1	4
Radiologists	1	1	3
Researchers	3	2	4

Percentage panelists that scored the statement as critical	3.2%
Percentage panelists that scored the statement as not important	79%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	4	Can refer to CAM morphology
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	2	seeing how my colleagues scored
4	3	In comparing with other definitions; I did not prefer this one.
6	2	Global view and reading more in the literature

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	6	2	1	4
Patient & Public In	2	1	3	2	1	3
Physical Therapists	1	1	2	1	1	2
Physicians	1	1	4	1	1	3

Radiologists	1	1	3	1	1	1
Researchers	3	2	4	3	2	3

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	3.2%	4.6%
Percentage panelists that scored the statement as not important	79%	84.6%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Statement 18: Cam-type abnormality is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

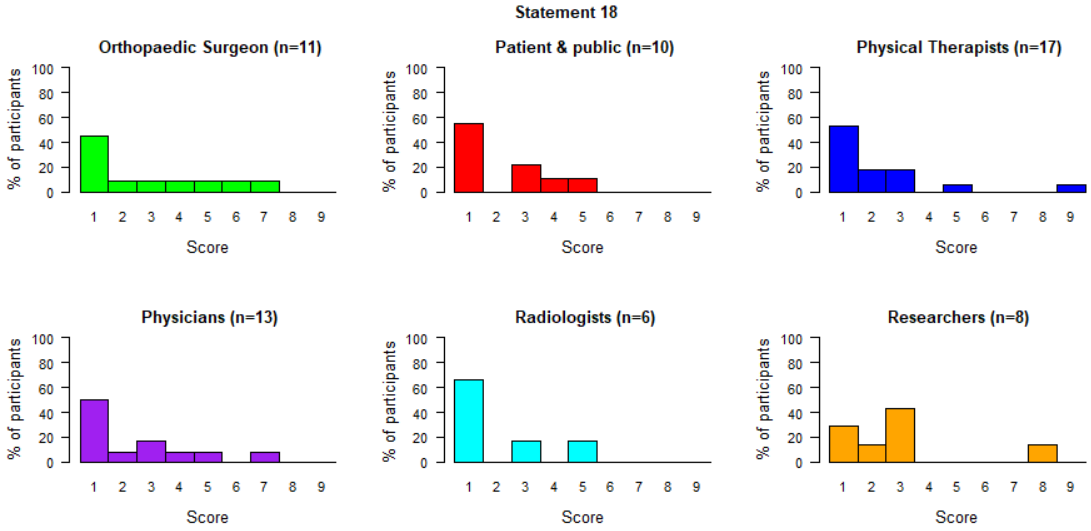
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

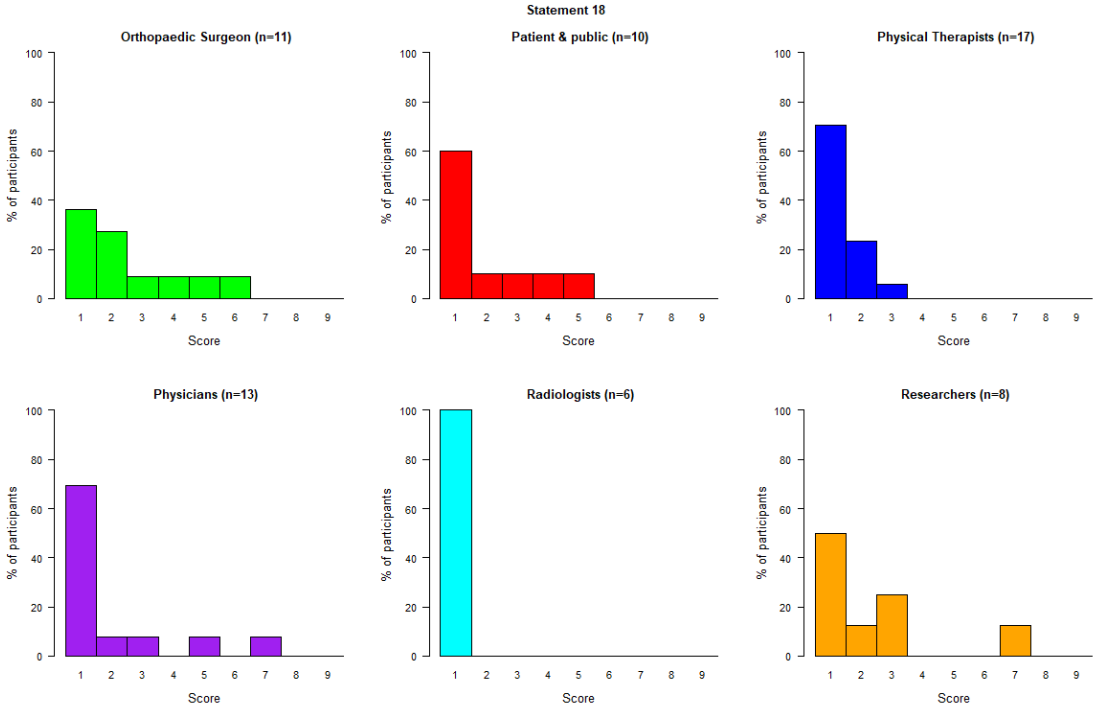
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	5
Patient & Public In	1	1	3
Physical Therapists	1	1	3
Physicians	2	1	4
Radiologists	1	1	3
Researchers	3	1	3

Percentage panelists that scored the statement as critical	6.5%
Percentage panelists that scored the statement as not important	79%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	5	Can refer to CAM morphology
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	1	seeing how my colleagues scored
6	2	Global view and reading more in the literature
5	1	Term abnormality

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	5	2	1	4
Patient & Public In	1	1	3	1	1	3
Physical Therapists	1	1	3	1	1	2
Physicians	2	1	4	1	1	2
Radiologists	1	1	3	1	1	1
Researchers	3	1	3	2	1	3

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	6.5%	3.1%
Percentage panelists that scored the statement as not important	79%	87.7%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 19: Cam-type lesion is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

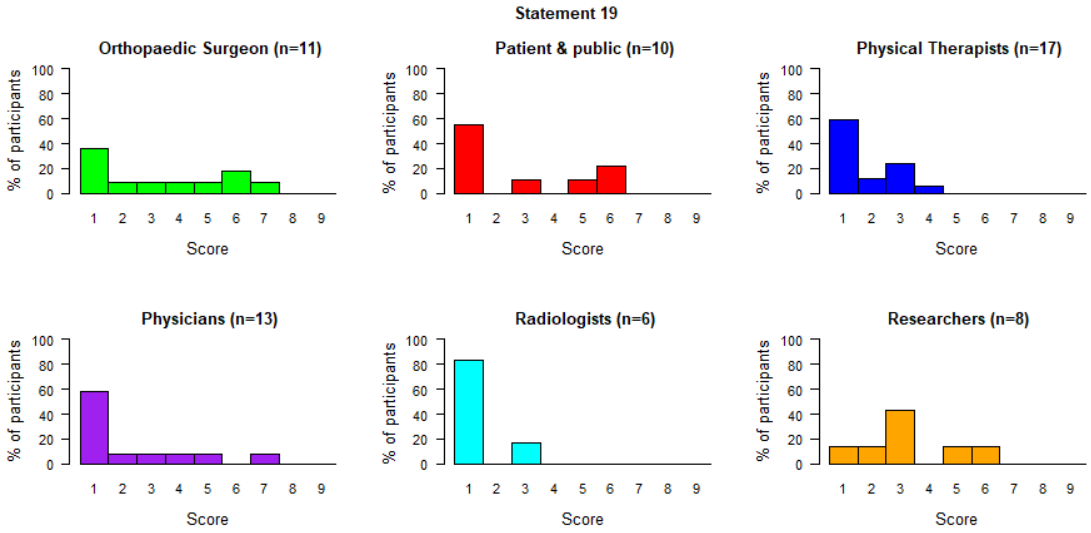
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

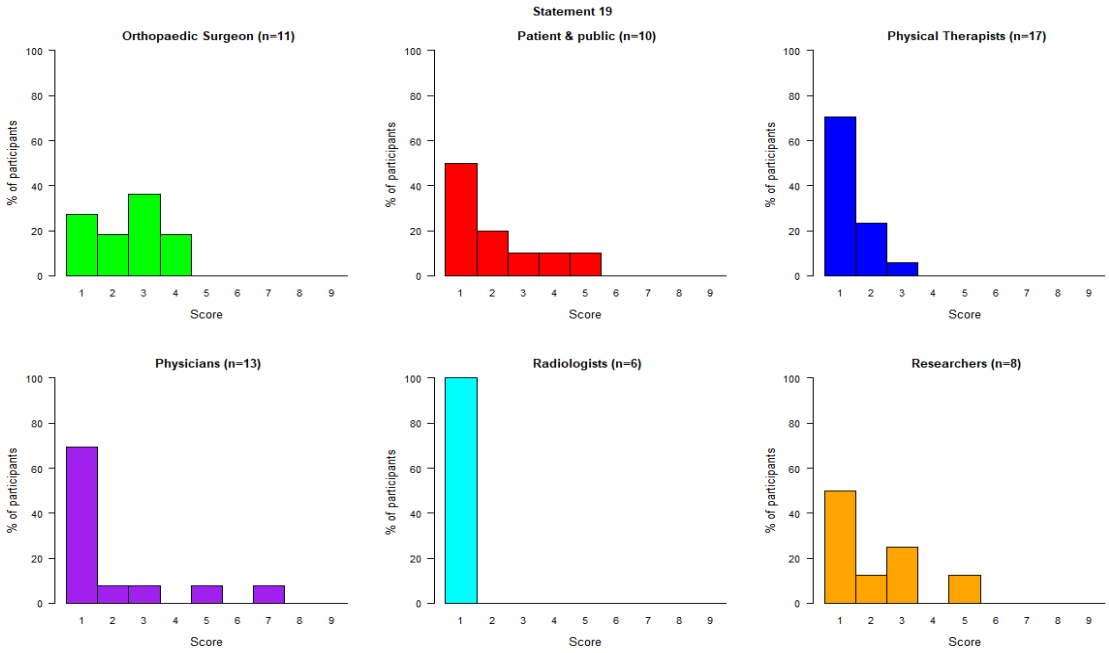
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	3	1	6
Patient & Public In	1	1	5
Physical Therapists	1	1	3
Physicians	1	1	4
Radiologists	1	1	1
Researchers	3	2	5

Percentage panelists that scored the statement as critical	3.2%
Percentage panelists that scored the statement as not important	77.4%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	4	Can refer to CAM morphology
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	2	seeing how my colleagues scored
6	2	Global view and reading more in the literature
6	3	Reviewing the statement I felt it was less important
5	2	Having followed webinar; I think that it isless important.

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	3	1	6	3	1	3
Patient & Public In	1	1	5	2	1	3
Physical Therapists	1	1	3	1	1	2
Physicians	1	1	4	1	1	2
Radiologists	1	1	1	1	1	1
Researchers	3	2	5	2	1	3

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	3.2%	1.5%
Percentage panelists that scored the statement as not important	77.4%	89.2%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 20: Pistol grip deformity is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

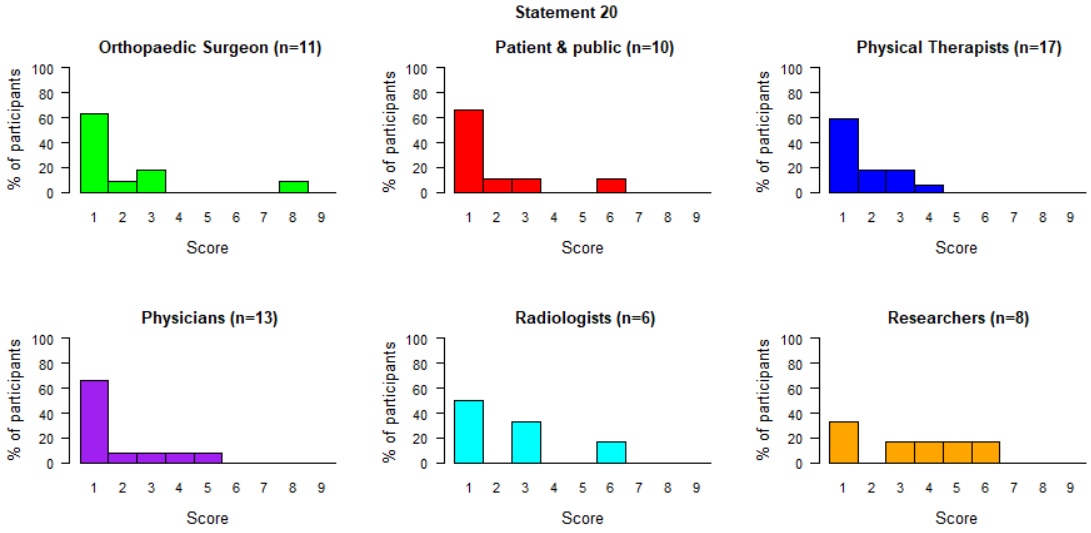
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

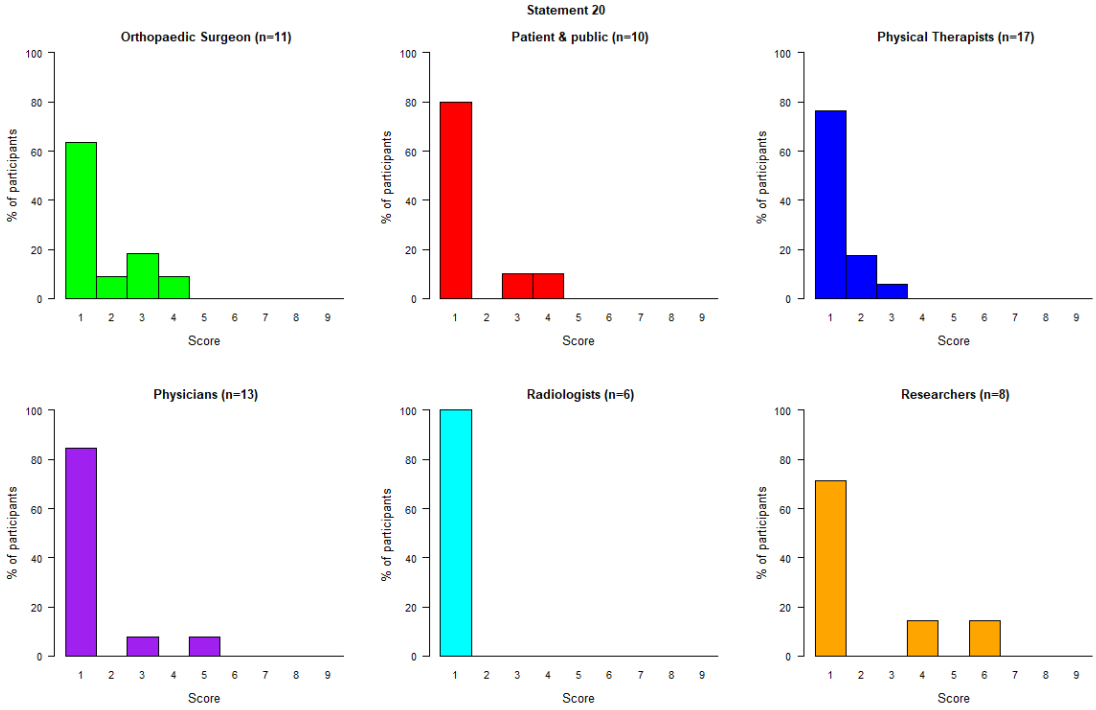
1. Add "is not" in place of "is"
2. unaware of this term...sorry



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	1	1	3
Patient & Public In	1	1	2
Physical Therapists	1	1	2
Physicians	1	1	3
Radiologists	2	1	3
Researchers	4	1	5

Percentage panelists that scored the statement as critical	1.6%
Percentage panelists that scored the statement as not important	85.2%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	1	seeing how my colleagues scored
5	1	Rethought the question and answer

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	1	1	3	1	1	3
Patient & Public In	1	1	2	1	1	1
Physical Therapists	1	1	2	1	1	1
Physicians	1	1	3	1	1	1
Radiologists	2	1	3	1	1	1
Researchers	4	1	5	1	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	1.6%	0%
Percentage panelists that scored the statement as not important	85.2%	92.2%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 21: Pistol grip lesion is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

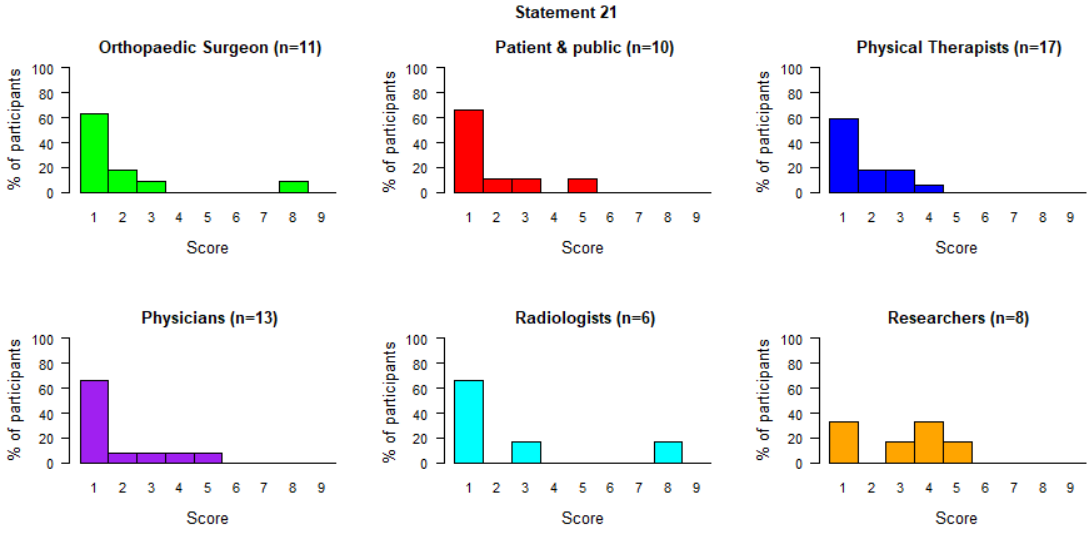
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

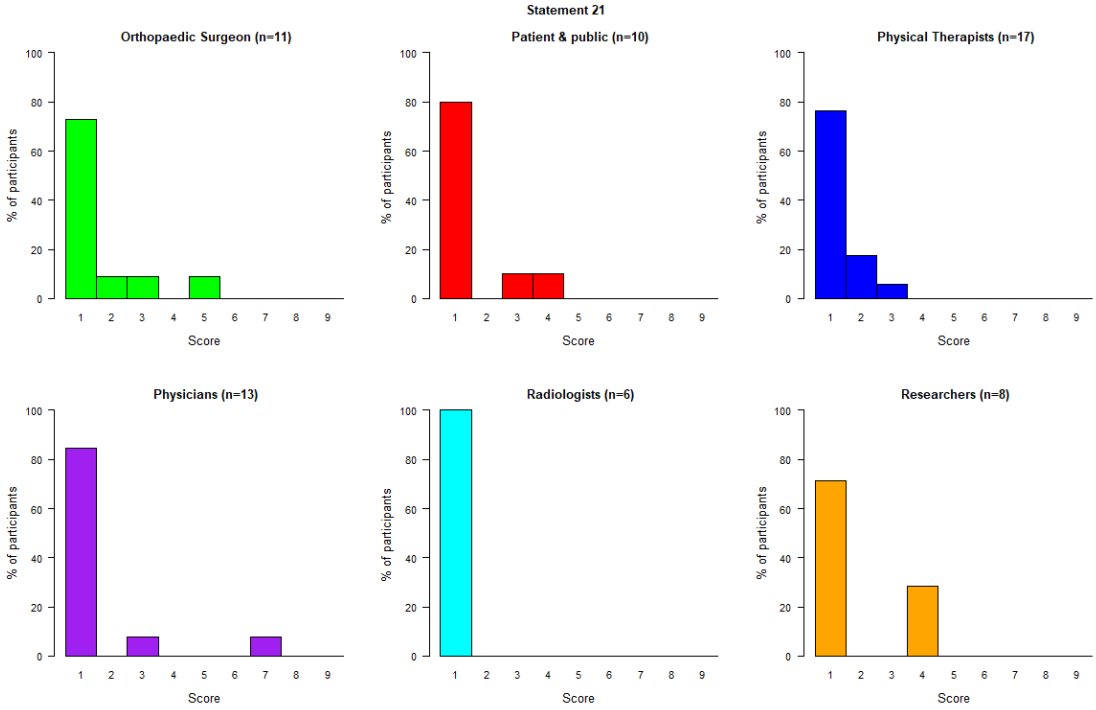
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	1	1	2
Patient & Public In	1	1	2
Physical Therapists	1	1	2
Physicians	1	1	3
Radiologists	1	1	3
Researchers	4	1	4

Percentage panelists that scored the statement as critical	3.3%
Percentage panelists that scored the statement as not important	85.2%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	1	seeing how my colleagues scored
5	1	Rethought the question and answer

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	1	1	2	1	1	2
Patient & Public In	1	1	2	1	1	1
Physical Therapists	1	1	2	1	1	1
Physicians	1	1	3	1	1	1
Radiologists	1	1	3	1	1	1
Researchers	4	1	4	1	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	3.3%	1.6%
Percentage panelists that scored the statement as not important	85.2%	92.2%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 22: Pistol grip abnormality is the preferred term to use for a bone/cartilage bump at any location around the femoral head-neck junction

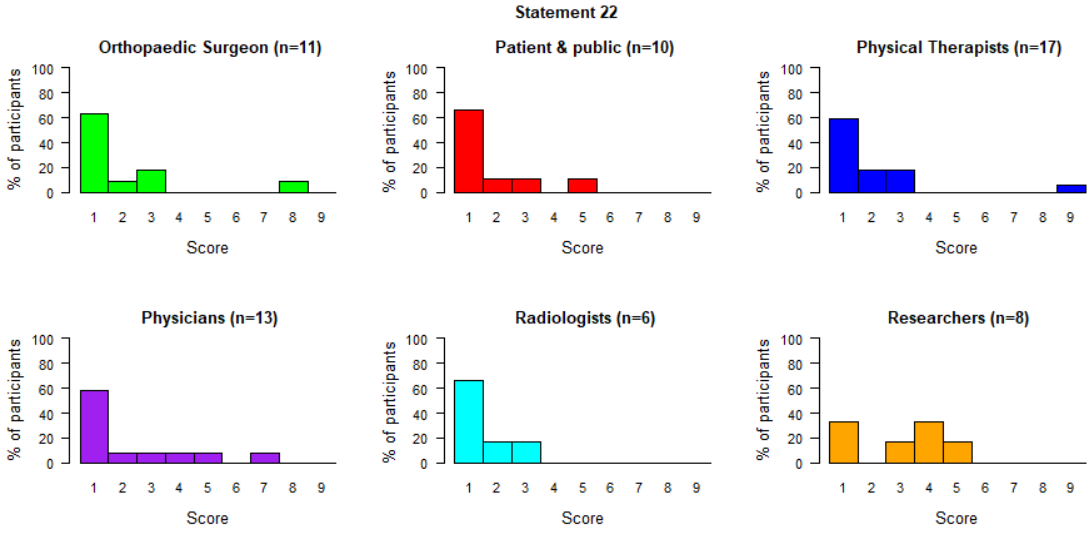
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: The Warwick Agreement on femoroacetabular impingement (FAI) syndrome (2016) recommended the following terminology: FAI syndrome and cam morphology. It recommended for the following terminology to be avoided: asymptomatic FAI, symptomatic FAI, FAI morphology, and deformity, abnormality or lesion when referring to cam morphology. Terminology

RESULTS: ROUND 1

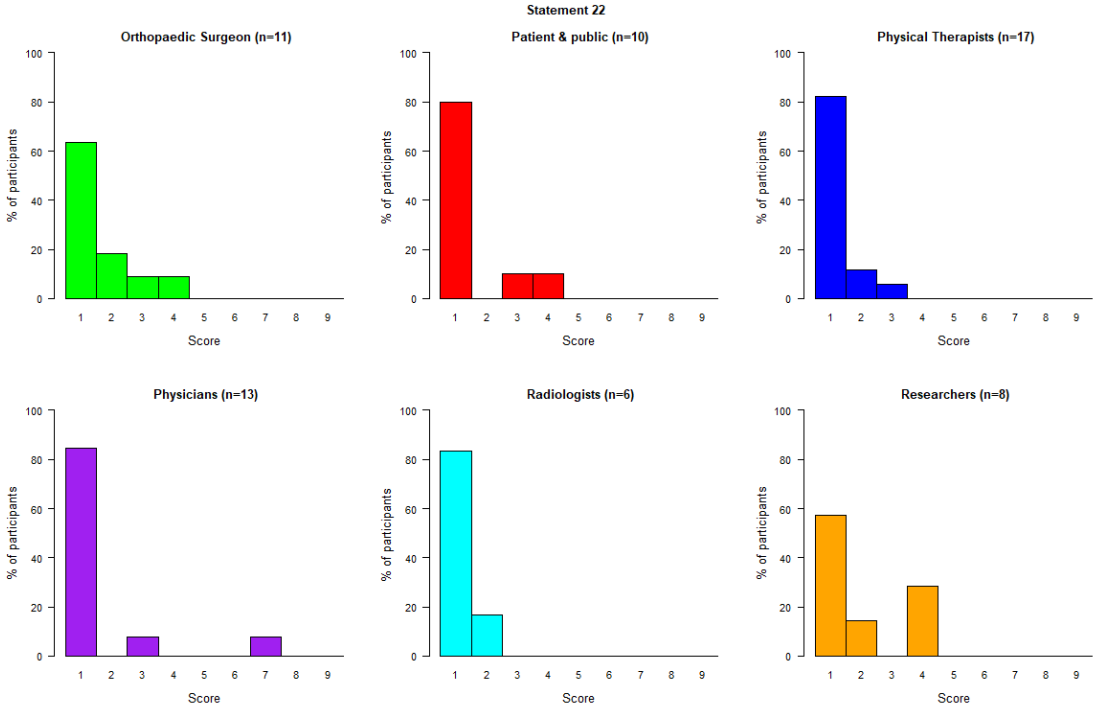
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	1	1	3
Patient & Public In	1	1	2
Physical Therapists	1	1	2
Physicians	1	1	4
Radiologists	1	1	2
Researchers	4	1	4

Percentage panelists that scored the statement as critical	4.9%
Percentage panelists that scored the statement as not important	85.2%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	1	seeing how my colleagues scored
7	1	better definition exists upon reflection
5	1	Rethought the question and answer

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	1	1	3	1	1	2
Patient & Public In	1	1	2	1	1	1
Physical Therapists	1	1	2	1	1	1
Physicians	1	1	4	1	1	1
Radiologists	1	1	2	1	1	1
Researchers	4	1	4	1	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	4.9%	1.6%
Percentage panelists that scored the statement as not important	85.2%	92.2%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Statement 23: Cam-type impingement is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

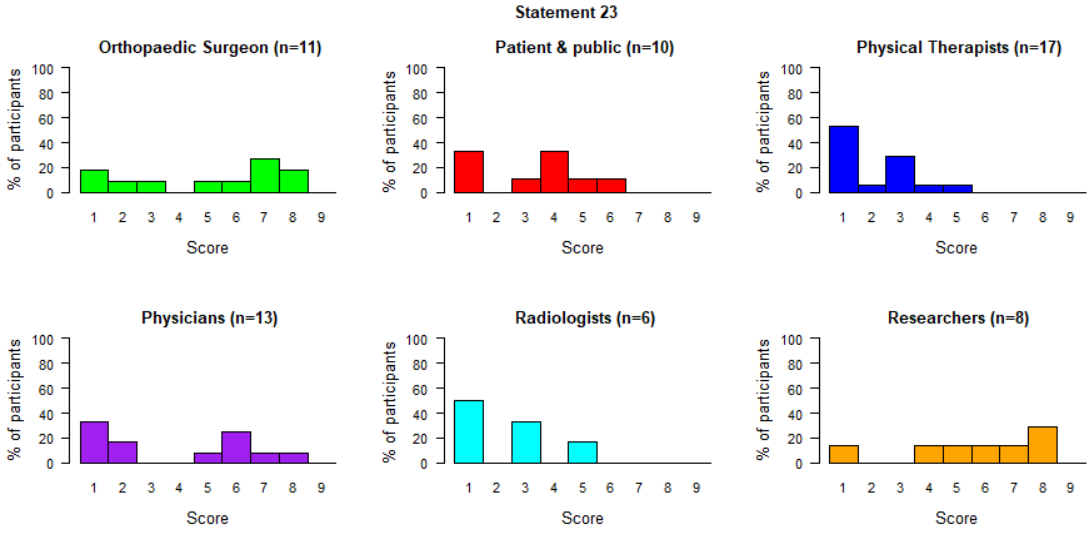
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUND 1

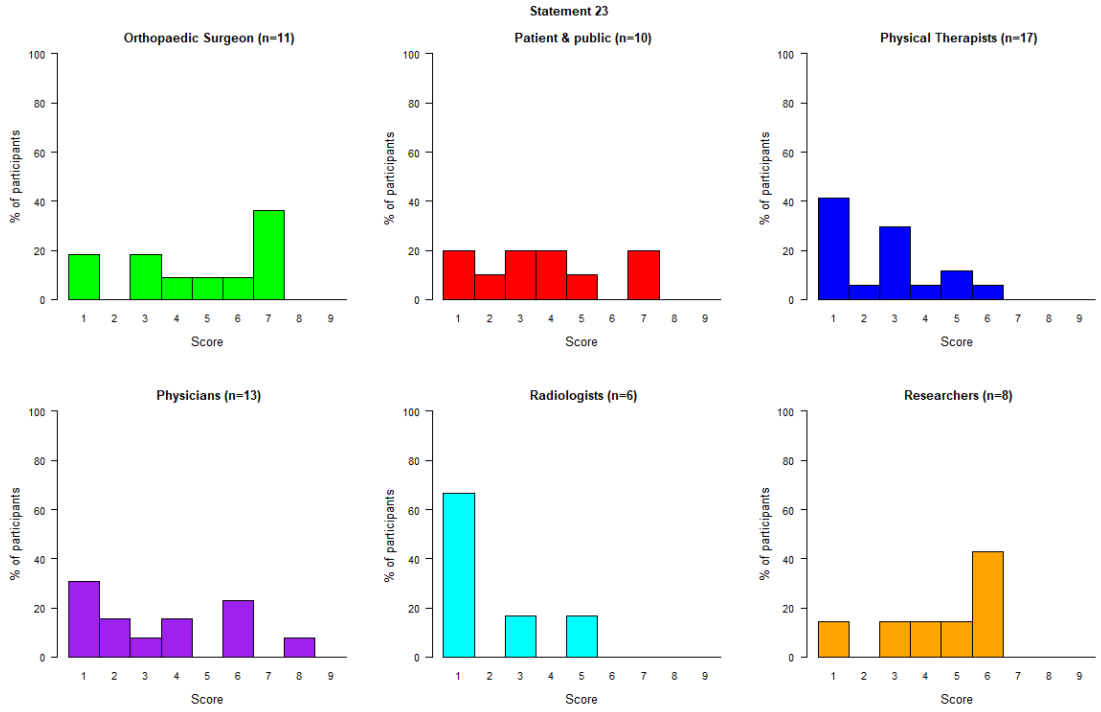
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	2	7
Patient & Public In	4	1	4
Physical Therapists	1	1	3
Physicians	4	1	6
Radiologists	2	1	3
Researchers	6	4	8

Percentage panelists that scored the statement as critical	16.1%
Percentage panelists that scored the statement as not important	56.5%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	7	Better understood the statement. Following my FAI diagnosis; the use of the term impingement for both cam and pincer was common.
3	5	I prefer the FAIS part of the earlier statement but feel this one is ok; took it out of the 'not agreed' category
1	5	I initially wanted syndrome in the term; but now feel this is not essential - I prefer to include femoroacetabular - therefore 5 here and 7 in previous statement.
6	7	Changed due to: mechanism is described in the terminology
1	4	mistake - syndrome is missing
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	3	seeing how my colleagues scored
8	3	better definition exists upon reflection
8	6	In comparing with other definitions; I did not prefer this one.
7	4	Reviewing the statement I felt there are better terms than this one
8	6	influenced by scores from other respondents

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	6	2	7	5	3	7
Patient & Public In	4	1	4	4	2	5
Physical Therapists	1	1	3	3	1	3
Physicians	4	1	6	3	1	6
Radiologists	2	1	3	1	1	3
Researchers	6	4	8	5	3	6

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	16.1%	10.9%
Percentage panelists that scored the statement as not important	56.5%	56.3%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Statement 24: Cam femoroacetabular impingement (FAI) is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

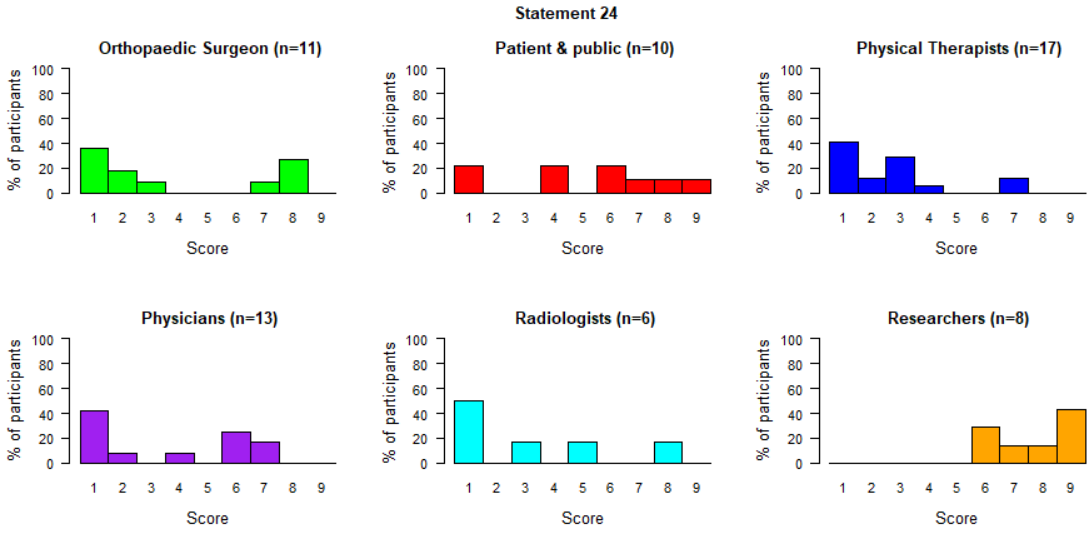
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUND 1

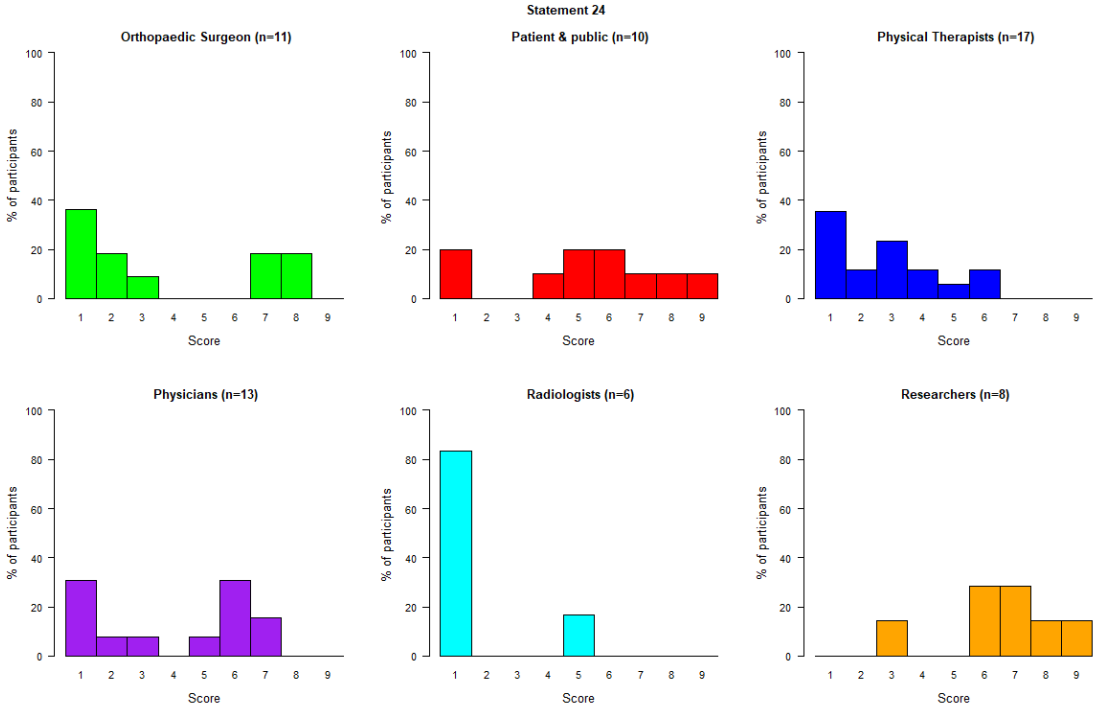
1. Add "is not" in place of "is"
2. with the addition of syndrome to FAI



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	8
Patient & Public In	6	4	7
Physical Therapists	2	1	3
Physicians	3	1	6
Radiologists	2	1	5
Researchers	8	6	9

Percentage panelists that scored the statement as critical	27.4%
Percentage panelists that scored the statement as not important	53.2%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R1

R1	R2	
1	6	Second webinar information
1	5	mistake - syndrome is missing
3	6	I misread the question initially
7	3	Realized that "syndrome" was not in there and FAI syndrome is preferred.
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	5	seeing how my colleagues scored
4	3	better definition exists upon reflection
7	6	important perspective of other colleagues to more clearly delineate

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	8	2	1	7
Patient & Public In	6	4	7	6	4	7
Physical Therapists	2	1	3	3	1	4
Physicians	3	1	6	5	1	6
Radiologists	2	1	5	1	1	1
Researchers	8	6	9	7	6	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	27.4%	20.3%
Percentage panelists that scored the statement as not important	53.2%	51.6%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 25: Cam-type femoroacetabular impingement (FAI) is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

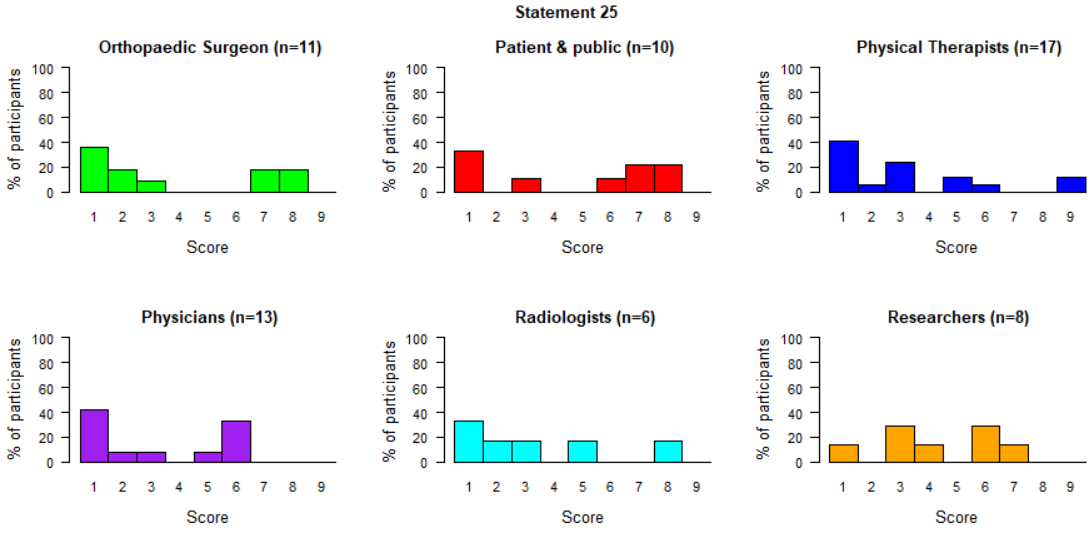
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUND 1

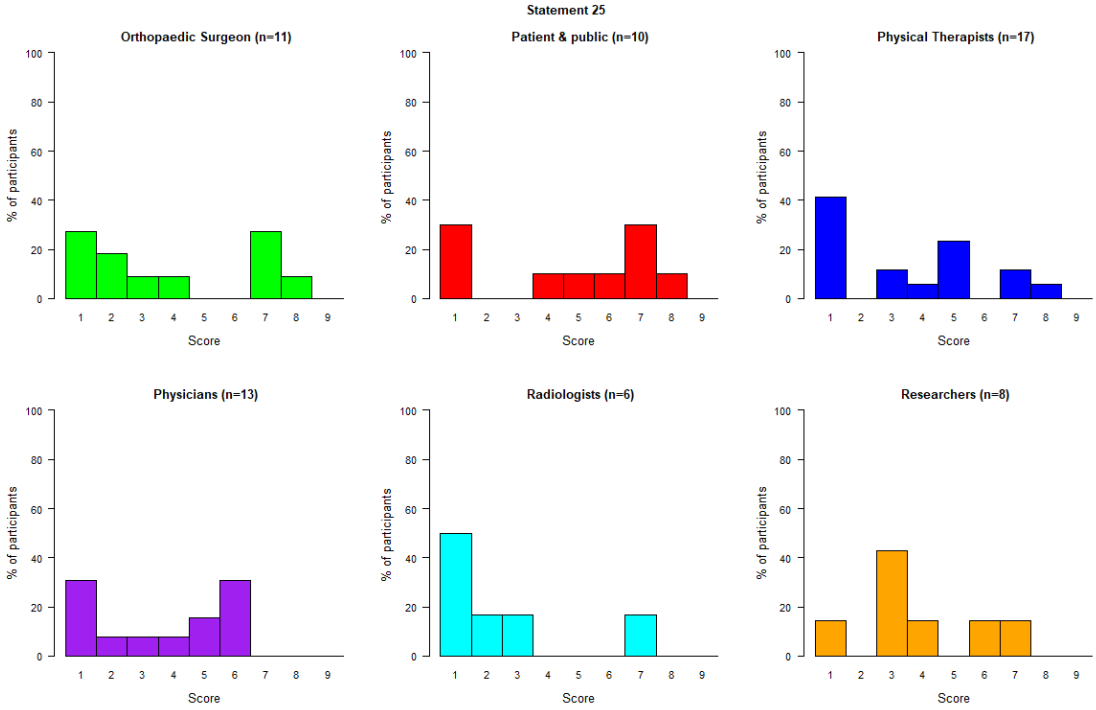
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	7
Patient & Public In	6	1	7
Physical Therapists	3	1	5
Physicians	3	1	6
Radiologists	3	1	5
Researchers	4	3	6

Percentage panelists that scored the statement as critical	19.4%
Percentage panelists that scored the statement as not important	59.7%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	7	Happy that 'cam type' impingement is an acceptable descriptor
3	7	I initially wanted syndrome in the term; but now feel this is not essential.
1	6	Second webinar informations
3	5	I misread the question initially
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
6	3	Realized that "syndrome" was not in there and FAI syndrome is preferred.
5	3	the clinical aspect is not known

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	7	3	1	7
Patient & Public In	6	1	7	6	1	7
Physical Therapists	3	1	5	3	1	5
Physicians	3	1	6	4	1	6

Radiologists	3	1	5	2	1	3
Researchers	4	3	6	3	3	6

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	19.4%	20.3%
Percentage panelists that scored the statement as not important	59.7%	51.6%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 26: Femoroacetabular impingement (FAI) Syndrome with cam morphology is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

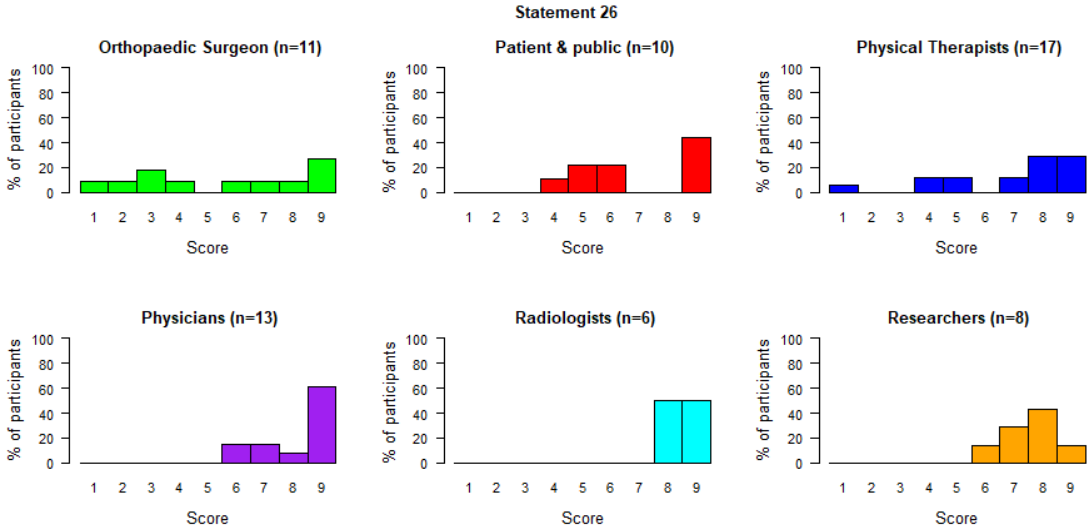
R1: NO CONSENSUS

R2: CONSENSUS IN

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip.

RESULTS: ROUND 1

1. This would be my 2nd placed vote; if we want to widen the definition to include FAI.
2. consider replacing bump by prominence. Not every cam morphology has a "bump". It might has only decreased offset and that certainly does not constitute a "bump"
3. I do not agree that you can say it is the preferred term for hip-related pain; but this is one type of pathology; that may occur in the hip

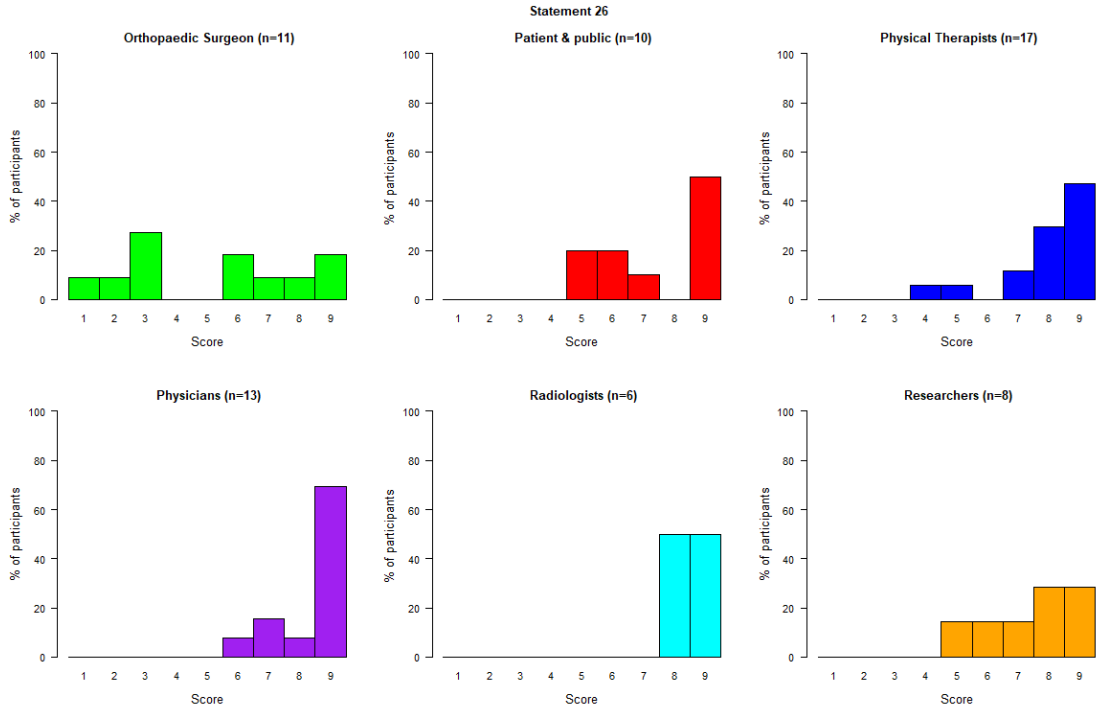


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	3	9
Patient & Public In	6	5	9
Physical Therapists	8	5	9
Physicians	9	7	9
Radiologists	9	8	9
Researchers	8	7	8

Percentage panelists that scored the statement as critical	69.8%

Percentage panelists that scored the statement as not important	7.9%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	8	Relevant to indicate FAI syndrome with the actual morphology (cam)
6	8	Second webinar informations
4	9	Change of mindset
6	7	I think is probably necessary to provide a better definition and I moved above the cut off to be considere
5	7	important perspective of other colleagues
6	7	Having followed webinar; I think that it is important.
9	5	I now preferred the cam-type FAI - and keep use of morphology for the specific finding of cam.
7	6	influenced by scores from other respondents

Median, IQR

	ROUND 1	ROUND 2

	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	3	9	6	3	8
Patient & Public In	6	5	9	8	6	9
Physical Therapists	8	5	9	8	8	9
Physicians	9	7	9	9	8	9
Radiologists	9	8	9	9	8	9
Researchers	8	7	8	8	6	9

	Round 1	Round 2
Percentage panelists that scored the statement as critical	69.8%	75%
Percentage panelists that scored the statement as not important	7.9%	7.8%
RESULT	**NO CONSENSUS**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 27: Femoroacetabular impingement (FAI) Syndrome with cam deformity is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

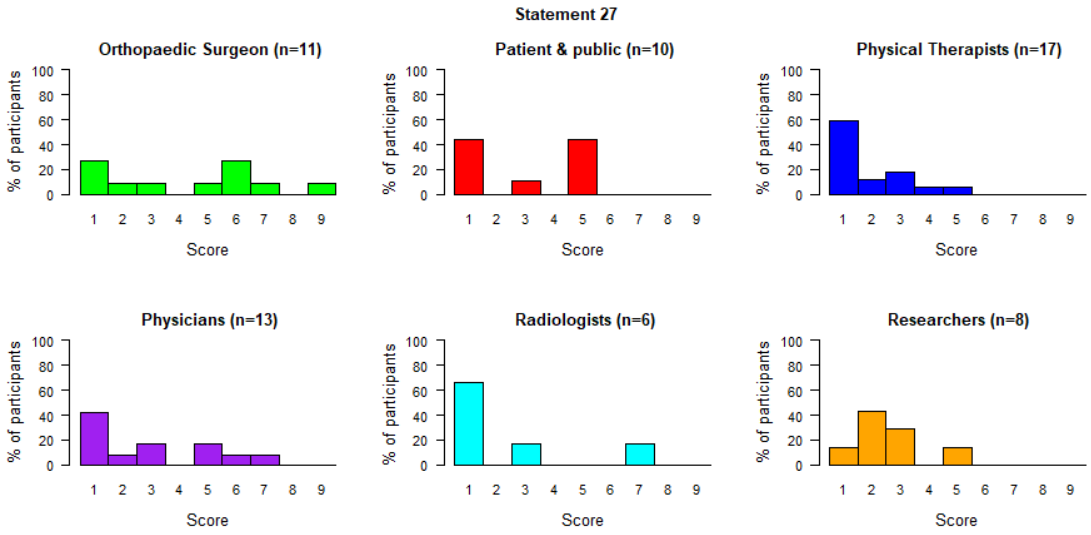
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip Terminology

RESULTS: ROUND 1

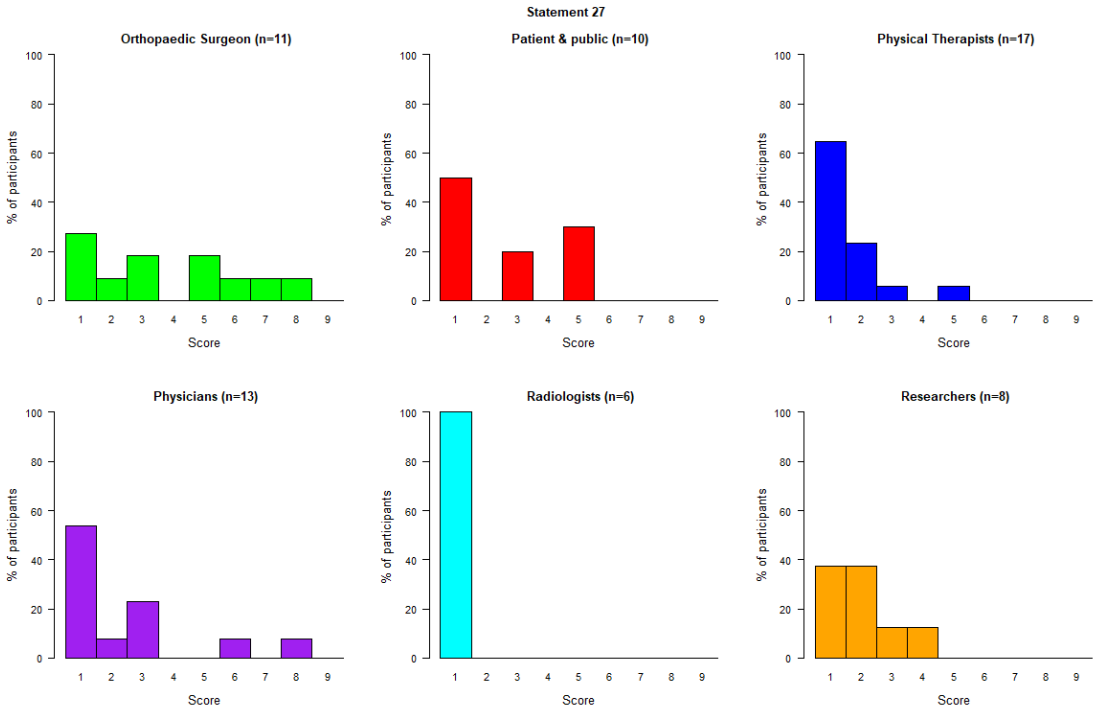
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	5	1	6
Patient & Public In	3	1	5
Physical Therapists	1	1	3
Physicians	3	1	5
Radiologists	1	1	3
Researchers	2	2	3

Percentage panelists that scored the statement as critical	6.5%
Percentage panelists that scored the statement as not important	71%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	5	seeing how my colleagues scored
5	3	Having followed webinar; I think that it is less important.
5	3	More confident that 'any location' is a bad element

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	5	1	6	3	1	6
Patient & Public In	3	1	5	2	1	5
Physical Therapists	1	1	3	1	1	2
Physicians	3	1	5	1	1	3
Radiologists	1	1	3	1	1	1
Researchers	2	2	3	2	1	3

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	6.5%	4.6%
Percentage panelists that scored the statement as not important	71%	81.5%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 28: Femoroacetabular impingement (FAI) Syndrome with cam abnormality is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

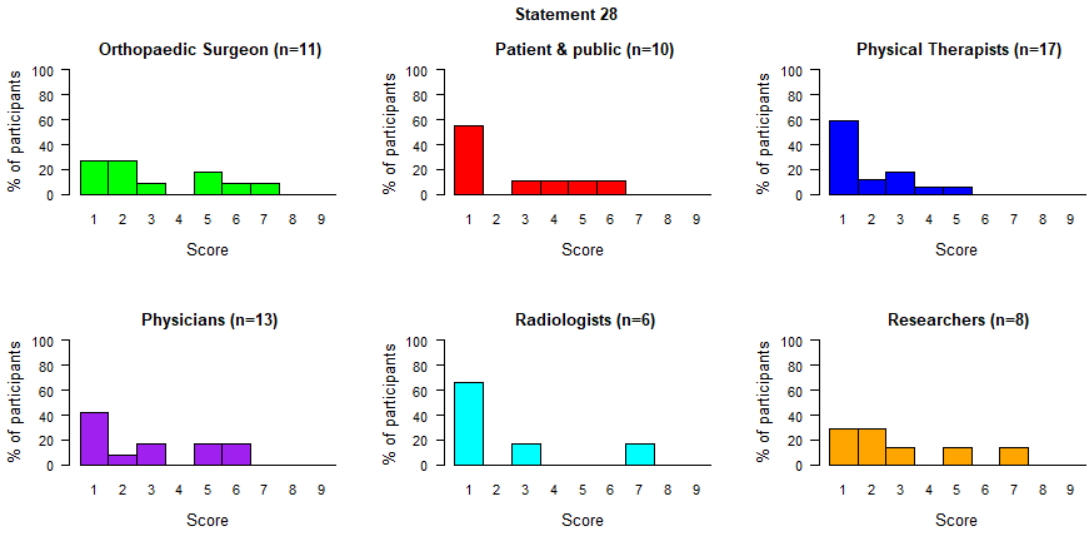
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUND 1

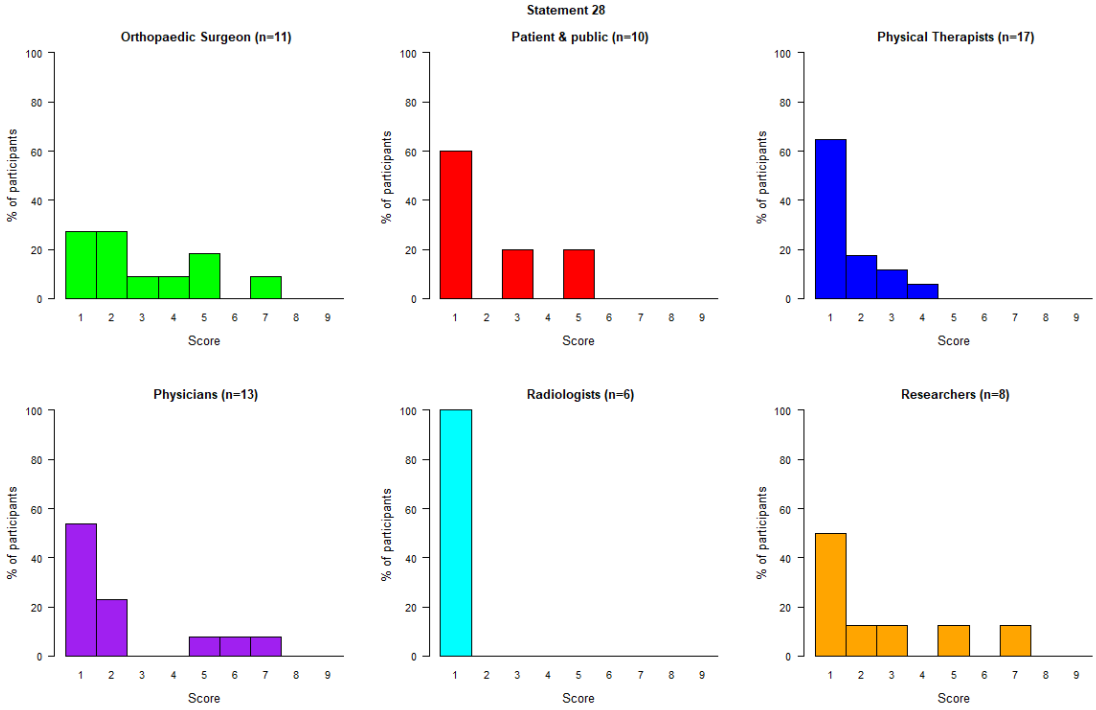
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	5
Patient & Public In	1	1	4
Physical Therapists	1	1	3
Physicians	3	1	5
Radiologists	1	1	3
Researchers	2	1	5

Percentage panelists that scored the statement as critical	4.8%
Percentage panelists that scored the statement as not important	74.2%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
2	4	CAM abnormality not necessarily saying FAI
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	1	seeing how my colleagues scored
4	3	Having followed webinar; I think that it is less important.
5	2	More confident that 'any location' is a bad element

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	5	2	1	5
Patient & Public In	1	1	4	1	1	3
Physical Therapists	1	1	3	1	1	2
Physicians	3	1	5	1	1	2
Radiologists	1	1	3	1	1	1
Researchers	2	1	5	2	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	4.8%	4.6%
Percentage panelists that scored the statement as not important	74.2%	81.5%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 29: Femoroacetabular impingement (FAI) Syndrome with cam lesion is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

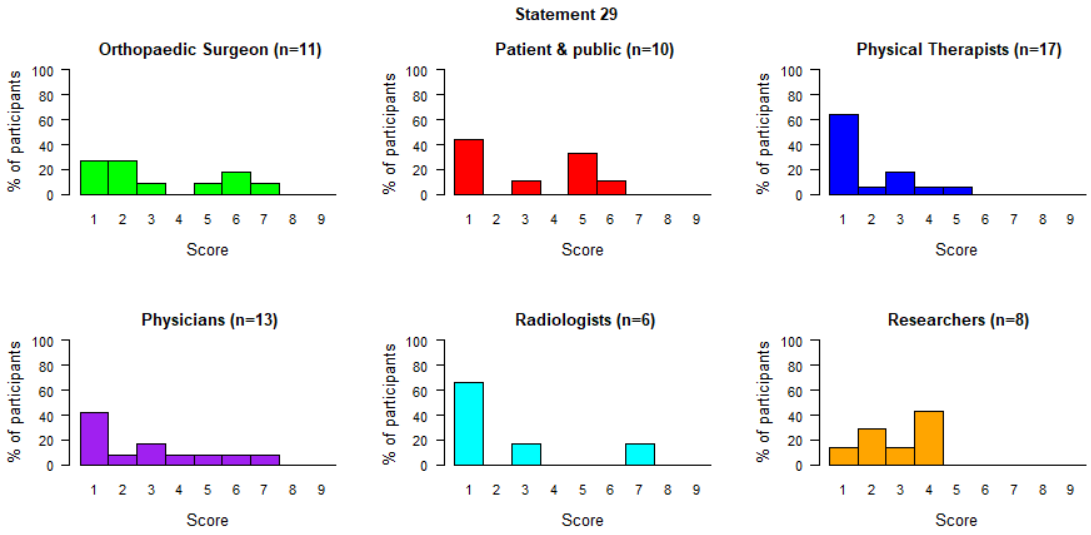
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUJND 1

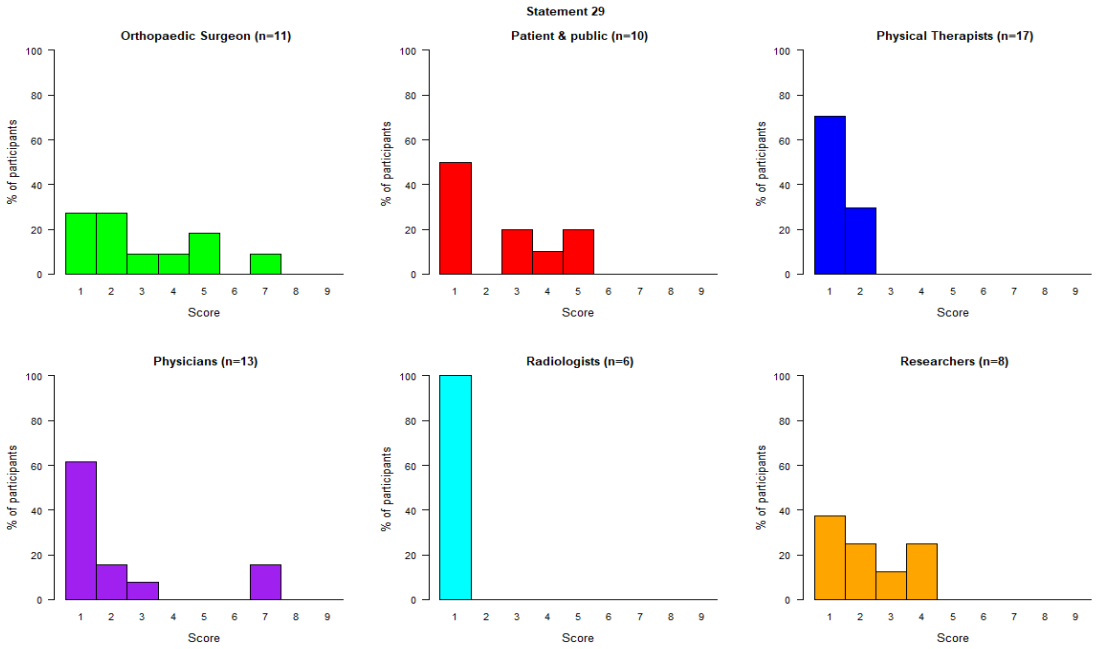
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	6
Patient & Public In	3	1	5
Physical Therapists	1	1	3
Physicians	3	1	5
Radiologists	1	1	3
Researchers	3	2	4

Percentage panelists that scored the statement as critical	4.8%
Percentage panelists that scored the statement as not important	71%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
2	4	CAM abnormality not necessarily saying FAI
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
10	3	seeing how my colleagues scored
4	3	In comparing with other definitions; I did not prefer this one.
5	2	important perspective of other colleagues to more clearly delineate
5	2	More confident that 'any location' is a bad element

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	6	2	1	5
Patient & Public In	3	1	5	2	1	4
Physical Therapists	1	1	3	1	1	2
Physicians	3	1	5	1	1	2
Radiologists	1	1	3	1	1	1
Researchers	3	2	4	2	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	4.8%	4.6%
Percentage panelists that scored the statement as not important	71%	83.1%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 30: Femoroacetabular impingement (FAI) Syndrome with cam-type abnormality is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

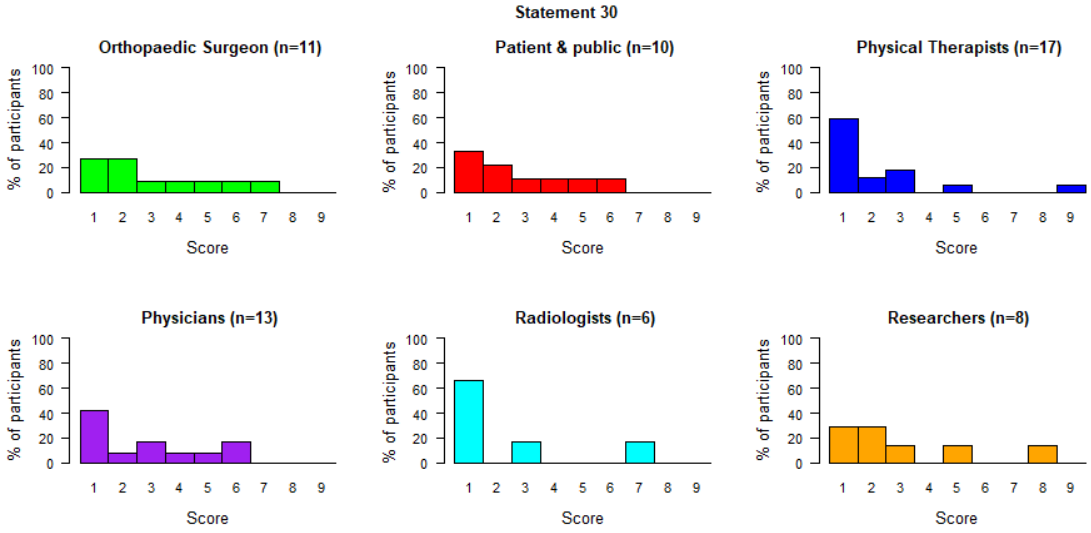
R1: CONSENSUS OUT

R2: CONSENSUS OUT

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUND 1

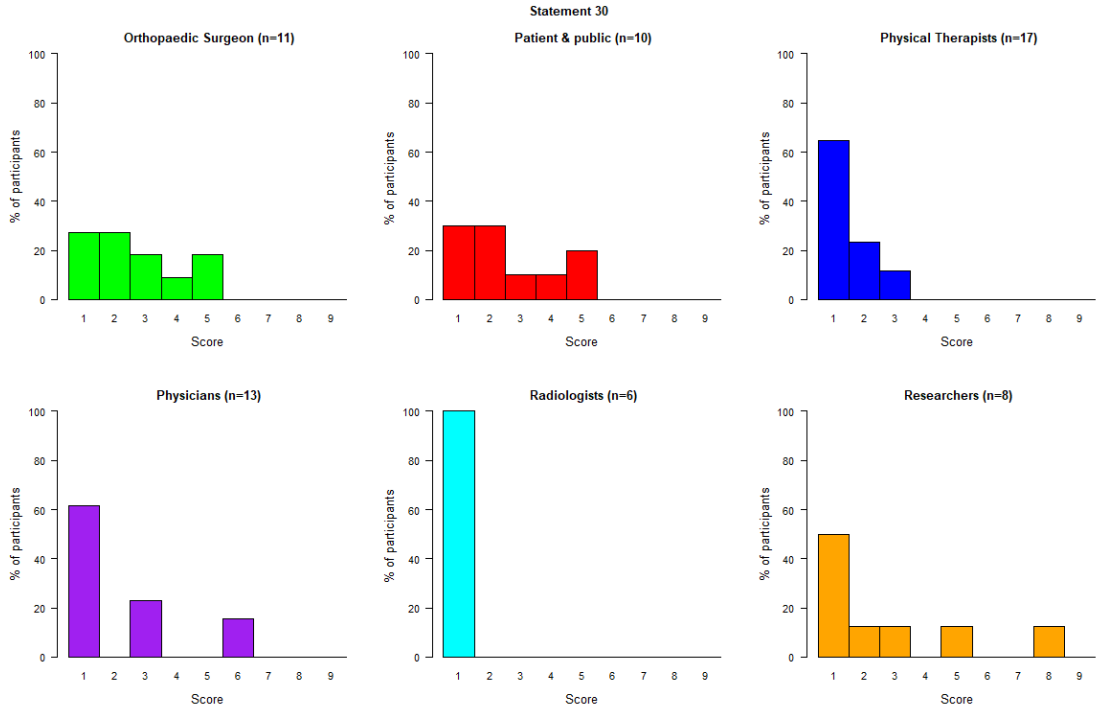
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	2	1	5
Patient & Public In	2	1	4
Physical Therapists	1	1	3
Physicians	3	1	5
Radiologists	1	1	3
Researchers	2	1	5

Percentage panelists that scored the statement as critical	6.5%
Percentage panelists that scored the statement as not important	74.2%
RESULT	**CONSENSUS OUT**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
7	3	Global view and reading more in the literature
10	2	seeing how my colleagues scored
5	2	important perspective of other colleagues to more clearly delineate
5	3	More confident that 'any location' is a bad element

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	2	1	5	2	1	4
Patient & Public In	2	1	4	2	1	4
Physical Therapists	1	1	3	1	1	2
Physicians	3	1	5	1	1	3

Radiologists	1	1	3	1	1	1
Researchers	2	1	5	2	1	4

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	6.5%	1.5%
Percentage panelists that scored the statement as not important	74.2%	84.6%
RESULT	**CONSENSUS OUT**	**CONSENSUS OUT**

Statement 31: Femoroacetabular impingement (FAI) Syndrome with cam-type deformity is the preferred term to use for hip-related pain due to a bony bump at any location around the femoral head-neck junction

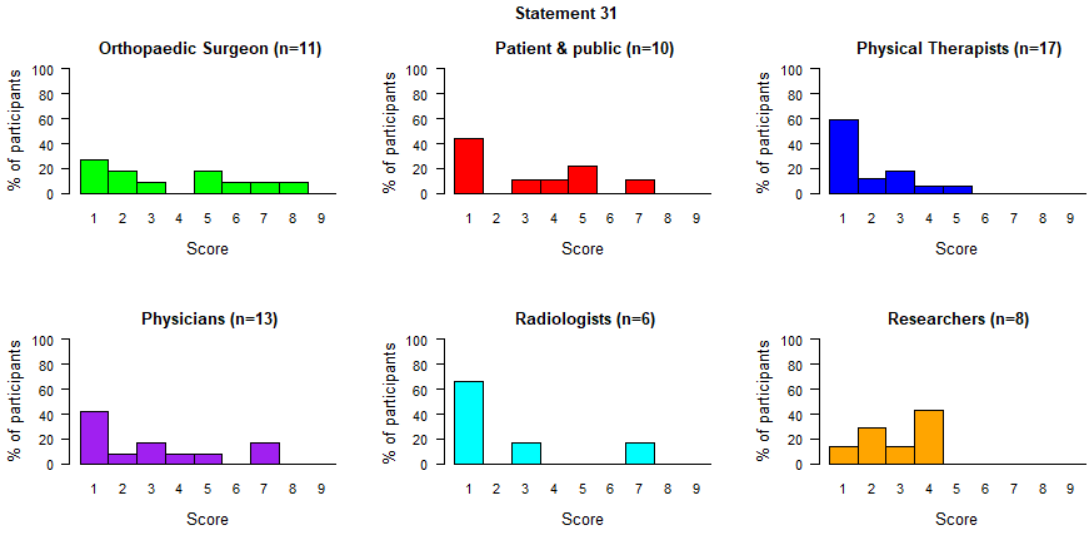
R1: NO CONSENSUS

R2: CONSENSUS OUT

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Symptoms therefore occur due to repeated 'earlier than normal' contact between the ball and socket of the hip. Terminology

RESULTS: ROUND 1

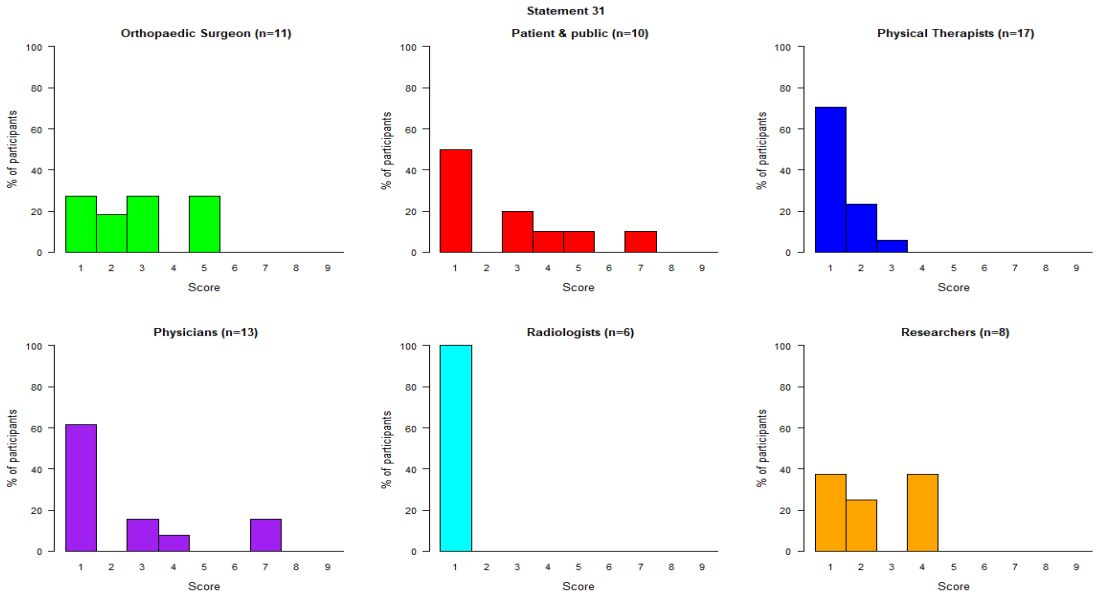
Add "is not" in place of "is"



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	3	1	6
Patient & Public In	3	1	5
Physical Therapists	1	1	3
Physicians	3	1	5
Radiologists	1	1	3
Researchers	3	2	4

Percentage panelists that scored the statement as critical	9.7%
Percentage panelists that scored the statement as not important	69.4%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
10	1	The explanation in the email clarifying terminology; i.e. 'not important=disagree'; etc
7	3	Global view and reading more in the literature
10	1	seeing how my colleagues scored
5	3	More confident that 'any location' is a bad element
8	5	My second read of this statement identified "at any location". I disagree with that statement as an inferior bony bump may not lead to FAI.
5	1	important perspective of other colleagues to more clearly delineate

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	3	1	6	3	1	5
Patient & Public In	3	1	5	2	1	4
Physical Therapists	1	1	3	1	1	2
Physicians	3	1	5	1	1	3
Radiologists	1	1	3	1	1	1
Researchers	3	2	4	2	1	4

	Round 1	**Round 2**

Percentage panelists that scored the statement as critical	9.7%	4.6%
Percentage panelists that scored the statement as not important	69.4%	81.5%
RESULT	**NO CONSENSUS**	**CONSENSUS OUT**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

TAXONOMY

Statement 32: We should distinguish between primary and secondary cam morphology in clinical practice

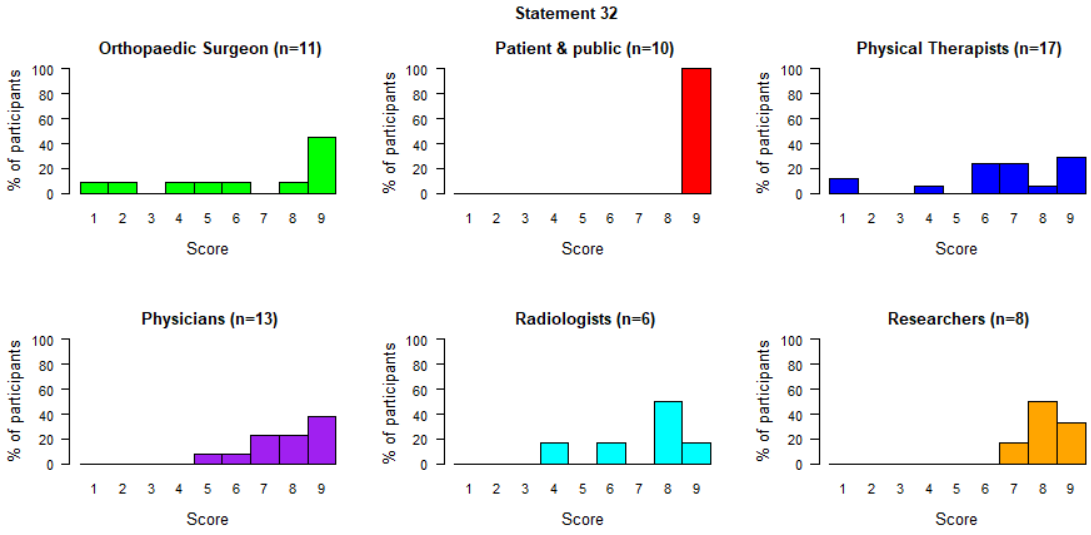
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

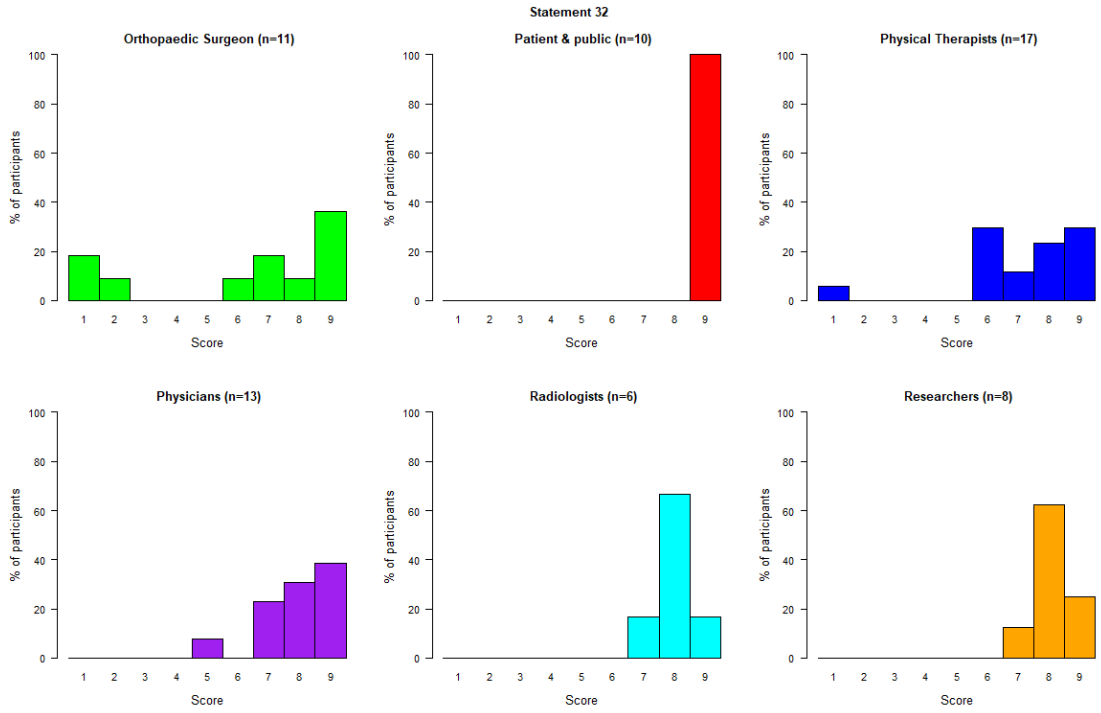
1. depends a bit on age - if someone is 30 years old - less relevant
2. from what I understand; treatment is different between the two...so yes
3. Agree but I wonder if there may be cases where a patient has a mix of both types. This note applies to all my answers in this section.
4. I agree mainly for the diagnosis



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	4	9
Patient & Public In	9	9	9
Physical Therapists	7	6	9
Physicians	8	7	9
Radiologists	8	6	8
Researchers	8	8	9

Percentage panelists that scored the statement as critical	74.2%
Percentage panelists that scored the statement as not important	6.5%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	8	Input from clinical or research opinion
1	6	At first; I was unsure if we should distinguish between the two; if we know; the prognosis is different. I think; we should distinguish.
5	7	Could be a topic of interest in research
6	8	reviewed other responses
4	7	At first it would be obvious so why distinguish; but it is important for therapy

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	4	9	7	2	9

Patient & Public In	9	9	9	9	9	9
Physical Therapists	7	6	9	8	6	9
Physicians	8	7	9	8	7	9
Radiologists	8	6	8	8	8	8
Researchers	8	8	9	8	8	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	74.2%	83.1%
Percentage panelists that scored the statement as not important	6.5%	6.2%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 33: We should distinguish between primary and secondary cam morphology in research

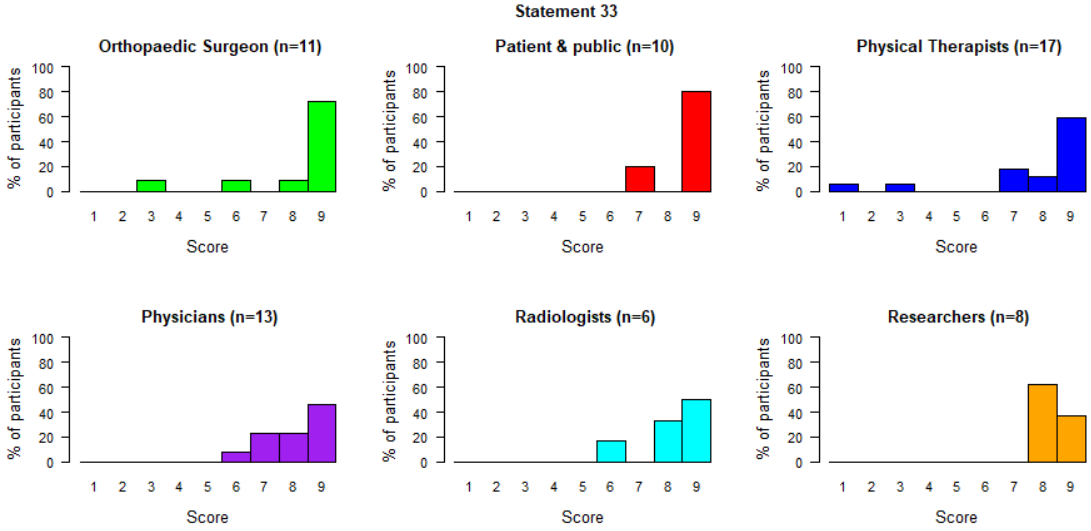
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: A primary medical condition is one that arises spontaneously and is not associated with or caused by a previous disease, injury, or acute event while a secondary medical condition develops due to a pre-existing medical condition. For example, primary osteoporosis, bone loss due to aging or the loss of sex steroids at menopause, differs from secondary osteoporosis which is due to conditions such as thyroid hormone imbalance or renal disease. Thus, primary cam morphology is cam morphology that is not caused by previous disease, injury or an acute event. Secondary cam morphology develops due to pre-existing hip disease or acute trauma including Perthes disease, slipped capital femoral epiphysis, healed proximal femoral fractures or acute fracture.

RESULTS: ROUND 1

- this assumes the distinction can be made!
- Agree but I wonder if there may be cases where a patient has a mix of both types. This note applies to all my answers in this section.

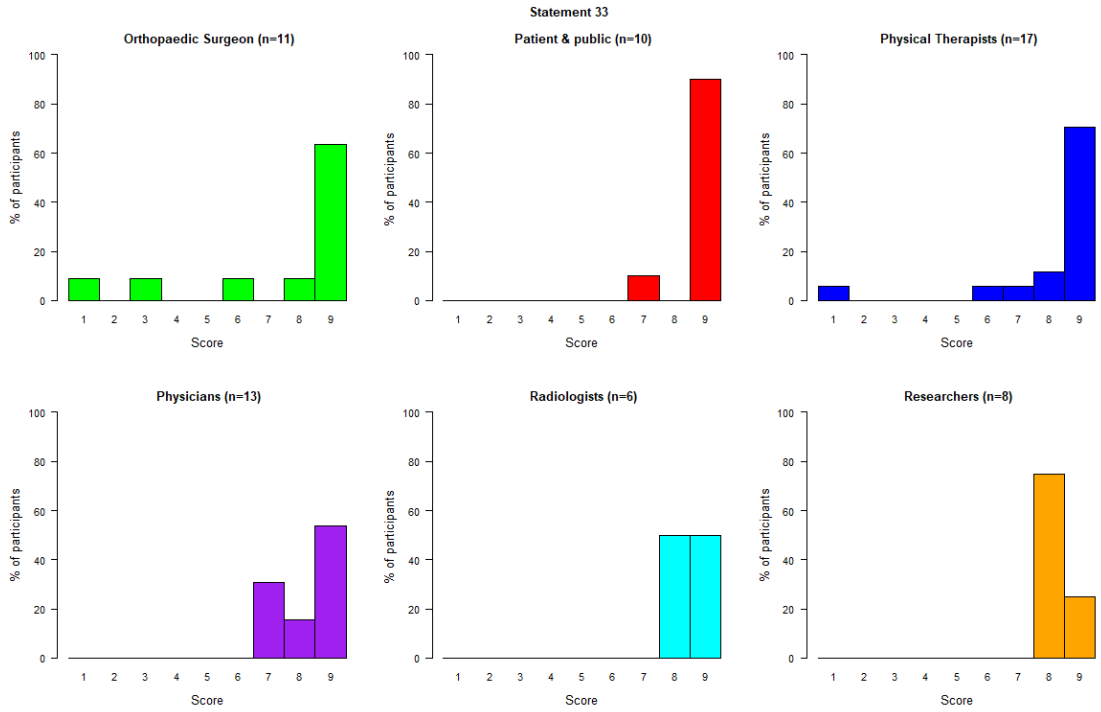


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	9	8	9
Patient & Public In	9	9	9
Physical Therapists	9	7	9
Physicians	8	7	9
Radiologists	9	8	9
Researchers	8	8	9

Percentage panelists that scored the statement as critical	90.8%
Percentage panelists that scored the statement as not important	4.6%

RESULT	CONSENSUS IN

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	6	At first; I was unsure if we should distinguish between the two; if we know; the prognosis is different. I think; we should distinguish.
6	8	yes it is different.

Median, IQR

	ROUND 1			ROUND 2		
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	9	8	9	9	6	9
Patient & Public In	9	9	9	9	9	9
Physical Therapists	9	7	9	9	8	9
Physicians	8	7	9	9	7	9
Radiologists	9	8	9	9	8	9
Researchers	8	8	9	8	8	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	90.8%	92.3%
Percentage panelists that scored the statement as not important	4.6%	4.6%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 34: We should distinguish between primary and secondary cam morphology in patients with femoroacetabular impingement syndrome

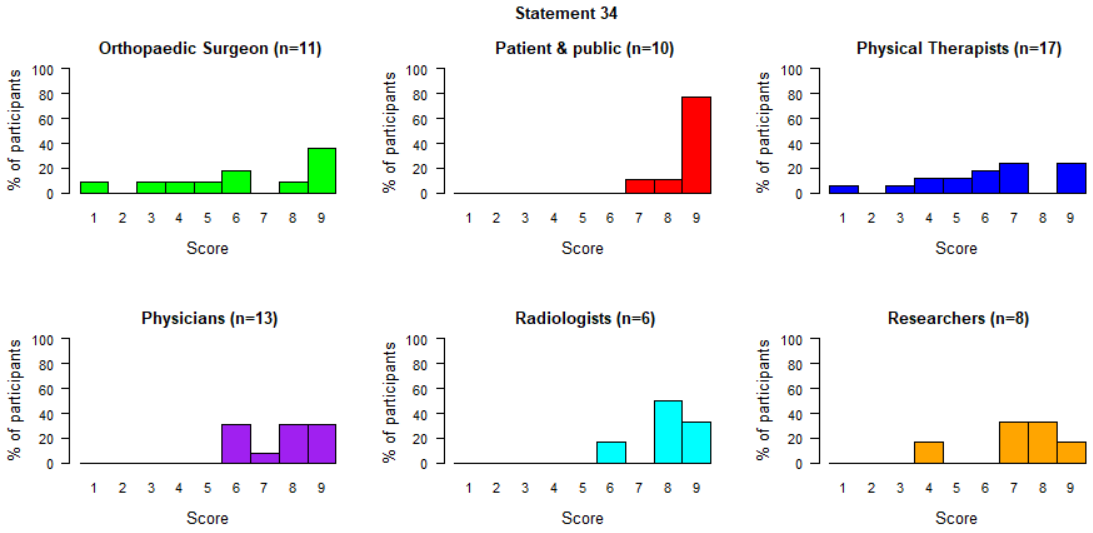
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Griffin et al., 2016 (Warwick agreement on FAI syndrome): Morphological assessment of the hip is required in order to diagnose FAI syndrome, identifying cam or pincer morphology. Cam morphology refers to a flattening or convexity at the femoral head neck junction. Pincer morphology refers to either global or focal overcoverage of the femoral head by the acetabulum. The panel emphasised that their presence, in the absence of appropriate symptoms and clinical signs, does not constitute a diagnosis of FAI syndrome. A substantial proportion of people in the general population are thought to have cam or pincer morphology. Taxonomy

RESULTS: ROUND 1

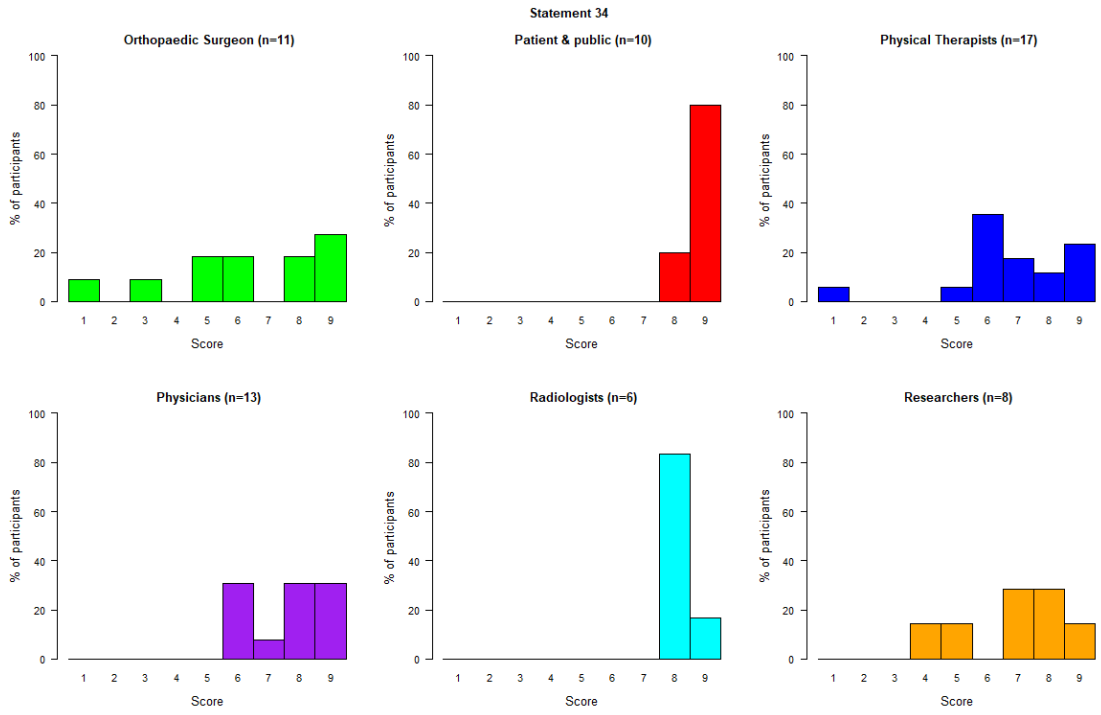
This 100% depends on prognosis - given the presence of previous injury; it would suggest secondary CAM morphology has a poorer prognosis and therefore should be distinguished to improve treatment planning.



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	4	9
Patient & Public In	9	9	9
Physical Therapists	6	5	7
Physicians	8	6	9
Radiologists	8	8	9
Researchers	8	7	8

Percentage panelists that scored the statement as critical	66.1%
Percentage panelists that scored the statement as not important	6.5%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	8	Input from clinical or research opinion
3	6	If we have scientific knowledge backing it up. I know we have some.
4	9	Change of mindset
1	5	Could be a topic of interest in research
8	6	calibration from the other disciplines
10	5	Felt more confident in being able to answer question
7	6	important perspective of other colleagues to more clearly delineate

Median, IQR

	ROUND 1	ROUND 2

	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	4	9	6	5	9
Patient & Public In	9	9	9	9	9	9
Physical Therapists	6	5	7	7	6	8
Physicians	8	6	9	8	6	9
Radiologists	8	8	9	8	8	8
Researchers	8	7	8	7	5	8

	Round 1	Round 2
Percentage panelists that scored the statement as critical	66.1%	68.8% (71.0%)*
Percentage panelists that scored the statement as not important	6.5%	4.7% (1.6%)*
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

* adjusted percentage after removing 2 outliers from round 2 are in brackets

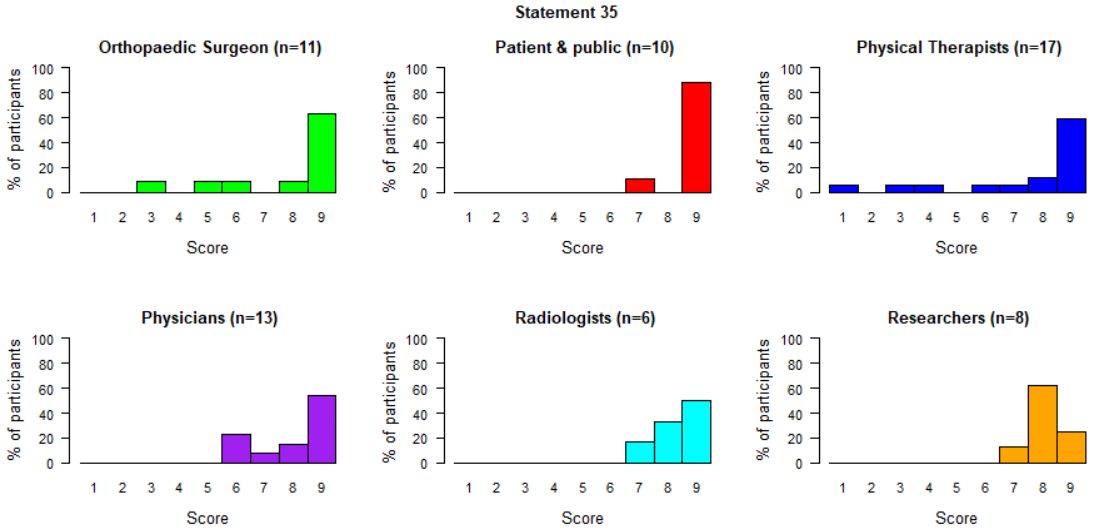
Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 35: We should distinguish between primary and secondary cam morphology in research participants with femoroacetabular impingement syndrome

R1: CONSENSUS IN

R2: CONSENSUS IN

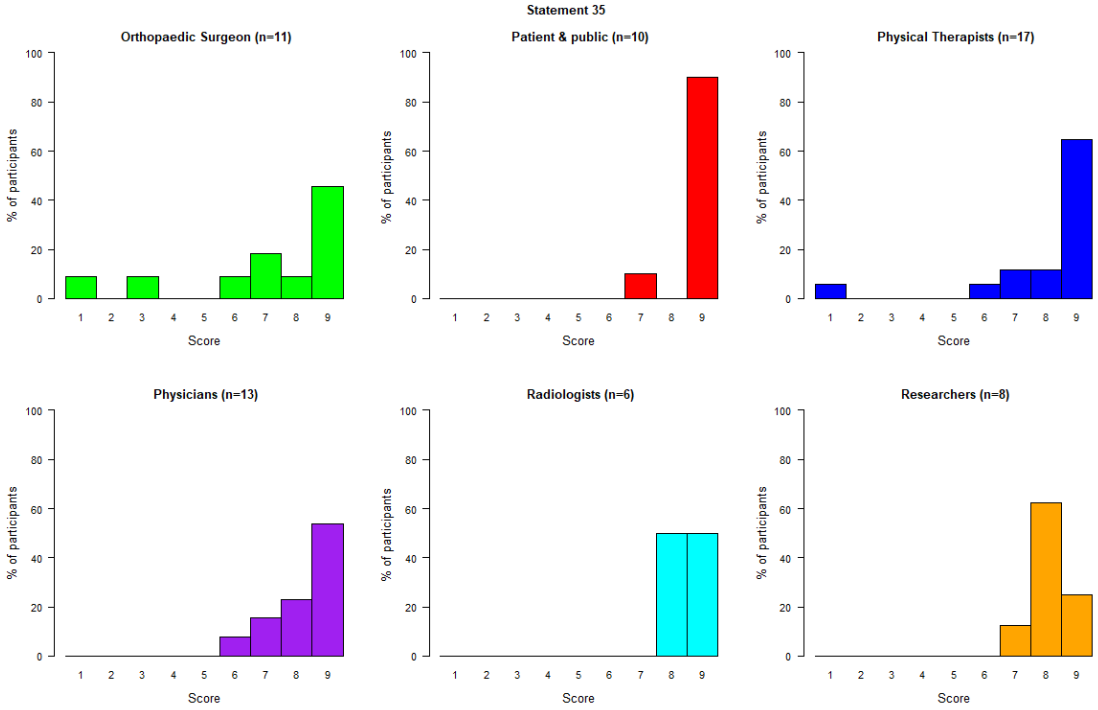
HELPTEXT: Femoroacetabular impingement (FAI) syndrome is a motion-related clinical disorder of the hip with a triad of symptoms, clinical signs and imaging findings. It represents symptomatic premature contact between the proximal femur and the acetabulum. Griffin et al., 2016 (Warwick agreement on FAI syndrome): Morphological assessment of the hip is required in order to diagnose FAI syndrome, identifying cam or pincer morphology. Cam morphology refers to a flattening or convexity at the femoral head neck junction. Pincer morphology refers to either global or focal overcoverage of the femoral head by the acetabulum. The panel emphasised that their presence, in the absence of appropriate symptoms and clinical signs, does not constitute a diagnosis of FAI syndrome. A substantial proportion of people in the general population are thought to have cam or pincer morphology.



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	9	6	9
Patient & Public In	9	9	9
Physical Therapists	9	7	9
Physicians	9	7	9
Radiologists	9	8	9
Researchers	8	8	9

Percentage panelists that scored the statement as critical	84.4%
Percentage panelists that scored the statement as not important	4.7%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	6	If we have scientific knowledge backing it up. I know we have some.
4	9	Change of mindset

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	9	6	9	8	6	9
Patient & Public In	9	9	9	9	9	9
Physical Therapists	9	7	9	9	8	9
Physicians	9	7	9	9	8	9
Radiologists	9	8	9	9	8	9
Researchers	8	8	9	8	8	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	84.4%	90.8%

Percentage panelists that scored the statement as not important	4.7%	4.6%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

IMAGING OUTCOMES

Statement 36: The main imaging modality for research on how primary cam morphology develops should be magnetic resonance (MR) with radial imaging (1.5T or 3 T)

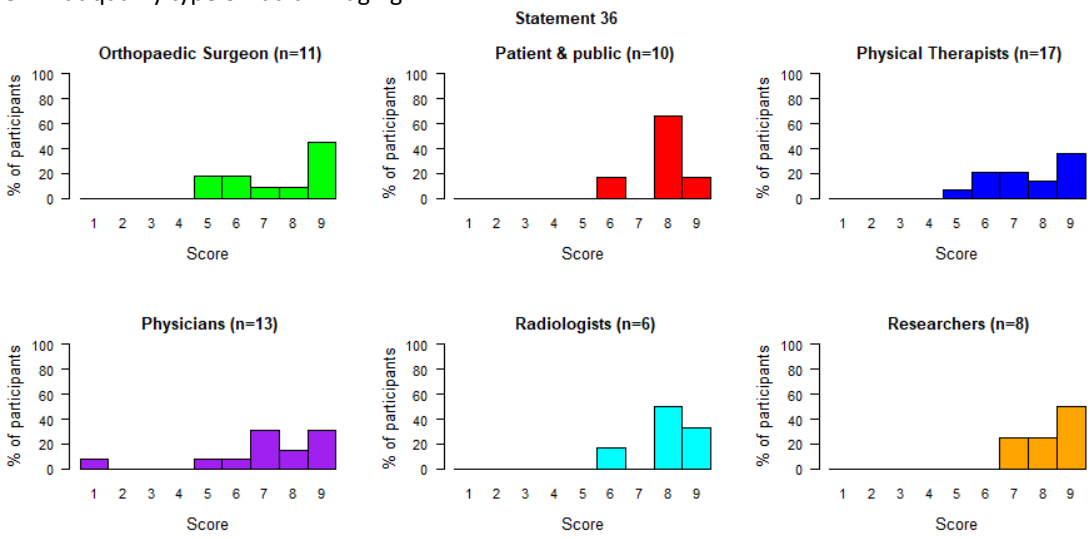
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: Magnetic resonance (MR) imaging is a medical imaging technique that uses a magnet to generate a magnetic field, causing the signal produced by the patient's body. These signals are used to form images of the anatomy and physiological processes of the body. The strength of the magnet (among other factors) affects the strength of this signal. The magnet field produced by Earth is 0.5 gauss. The magnet field produced by the magnet in a 1.5 Tesla (T) MR imaging machine is 15,000 gauss (30,000 stronger than Earth's magnetic field). A 3T MR imaging machine uses an even stronger magnetic field to provide clearer and more detailed images.

RESULTS: ROUND 1

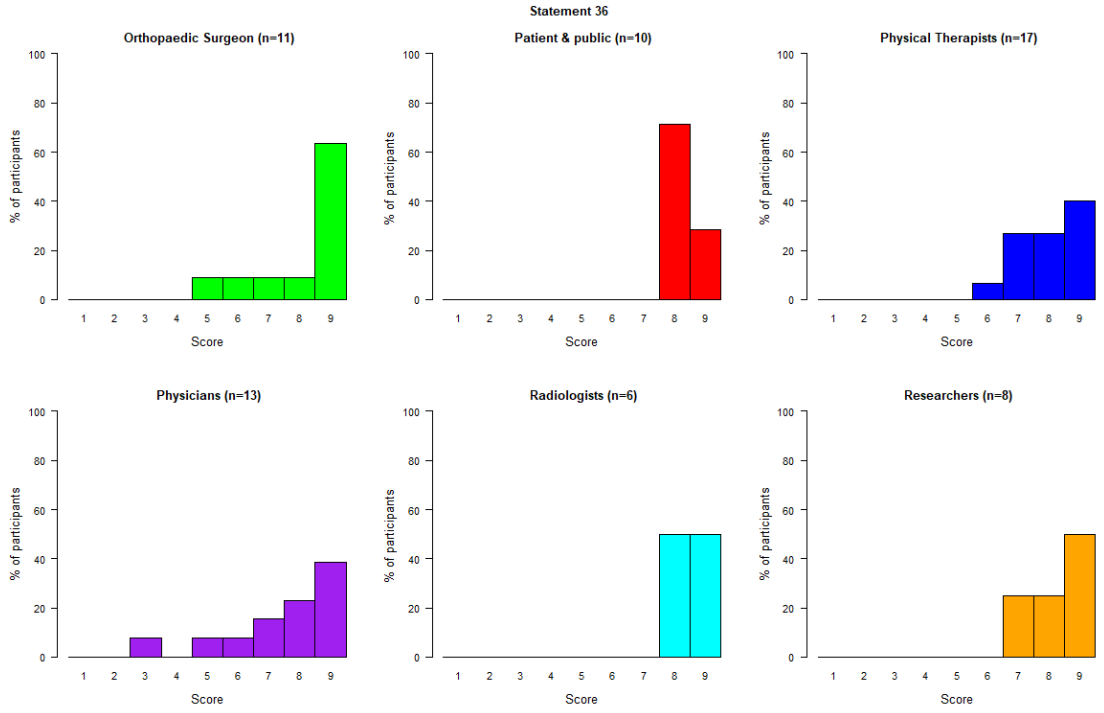
1. huge cost aspect here - depends on the research question in case
2. serial imaging seems to help with understanding with development. X-rays first option for diagnosis
3. I have watched webinars 1&2 but that is the sum of my knowledge on this topic. Apologies that I feel I do not have enough knowledge to accurately and reliably answer most qs in this section.
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. But qualify type of radial imaging



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	6	9
Patient & Public In	8	8	8
Physical Therapists	8	6	9
Physicians	7	7	9
Radiologists	8	8	9
Researchers	9	8	9

Percentage panelists that scored the statement as critical	75.9%
Percentage panelists that scored the statement as not important	1.9%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	7	Important to agree on modalities
6	9	Changes in protocols with MRI in our institution have allowed accurate osseous and soft tissue morphology without radiation (CT); This now largely eliminates the need for other advanced imaging techniques.
5	7	Global view and reading more in the literature
6	7	reviewed other responses
6	8	agreee more; but radiographs can help
6	8	Having followed webinar; I think that it is important.
6	8	important perspective of other colleagues (radiologists)

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	6	9	9	7	9
Patient & Public In	8	8	8	8	8	9
Physical Therapists	8	6	9	8	7	9
Physicians	7	7	9	8	7	9
Radiologists	8	8	9	9	8	9
Researchers	9	8	9	9	8	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	75.9%	89.3%
Percentage panelists that scored the statement as not important	1.9%	1.8%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Statement 37: The minimum acceptable number of radial sequence magnetic resonance (MR) imaging slices for research on how primary cam morphology develops should be 12 slices (30° intervals, in all 12 clock face positions from 12 o'clock to 11 o'clock positions)

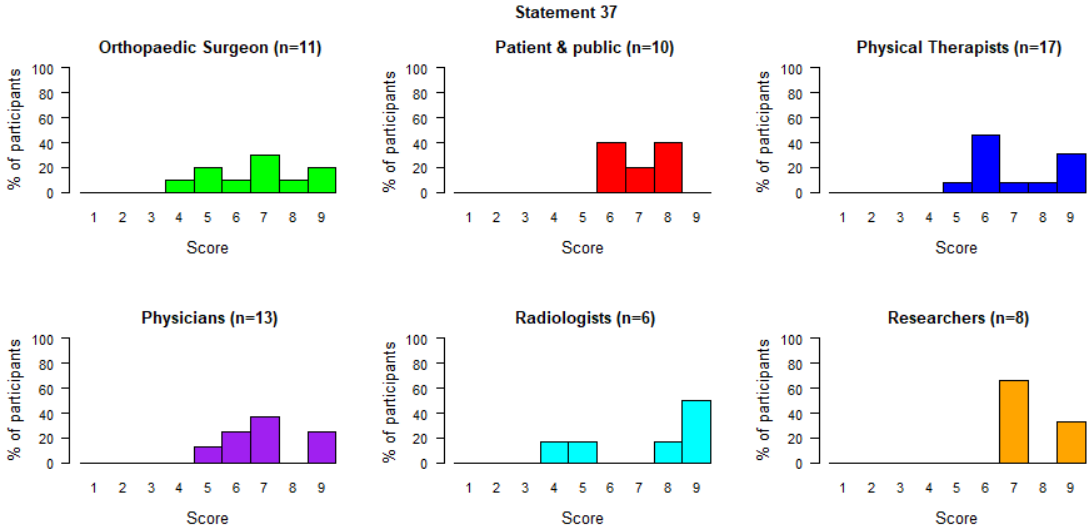
R1: NO CONSENSUS

R2: CONSENSUS IN

HELPTEXT: Many clinicians and researchers use a clock face system to describe the location of cam morphology on radial magnetic resonance (MR) or computed tomography (CT) imaging around the axis of the femoral neck, normally 30° intervals with 12 o'clock as the superior (top) location, and 3 o'clock, 6 o'clock and 9 o'clock as the anterior, inferior (bottom) and posterior locations, respectively (when facing 'the clock').

RESULTS: ROUND 1

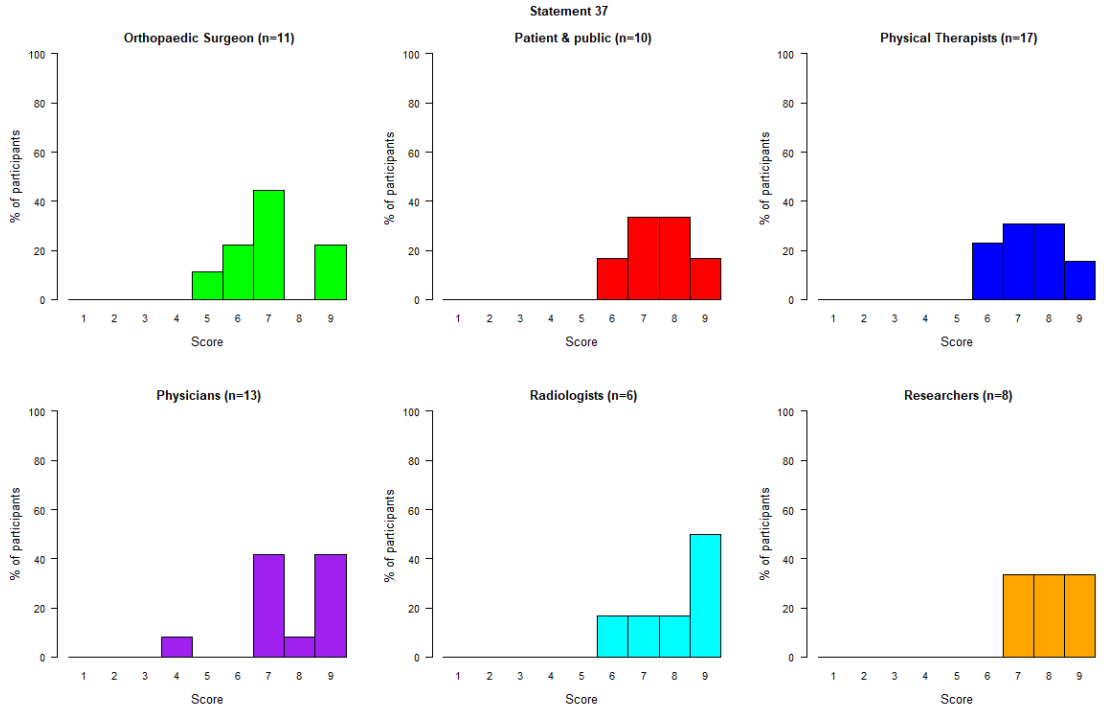
1. I learnt a lot from the webinar; but Radiology is not my field of expertise.
2. As a non-clinician; I don't have a strong understanding of MRI sequences and feel unqualified to answer these questions
3. Number of slices is not that important if you can do 3d imaging with MPR
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. It sounds reasonable; but I do not feel qualified to provide an answer with certainty. It for instance be influenced by the specific research question.



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	8
Patient & Public In	7	6	8
Physical Therapists	6	6	9
Physicians	7	6	8
Radiologists	9	5	9
Researchers	7	7	9

Percentage panelists that scored the statement as critical	60%
Percentage panelists that scored the statement as not important	0%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	8	Second webinar informations
6	7	reviewed other responses
6	7	Seems important across the cohorts.
6	8	Took my lead from radiologists group response; their area of expertise
5	7	if it is the same than it is easier to compare; but some difficulties between vendors
6	7	Having followed webinar; I think that it is important.
10	4	less certain

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	5	8	7	6	7
Patient & Public In	7	6	8	8	7	8
Physical Therapists	6	6	9	7	7	8
Physicians	7	6	8	8	7	9
Radiologists	9	5	9	9	7	9
Researchers	7	7	9	8	7	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	60%	81.6%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**NO CONSENSUS**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

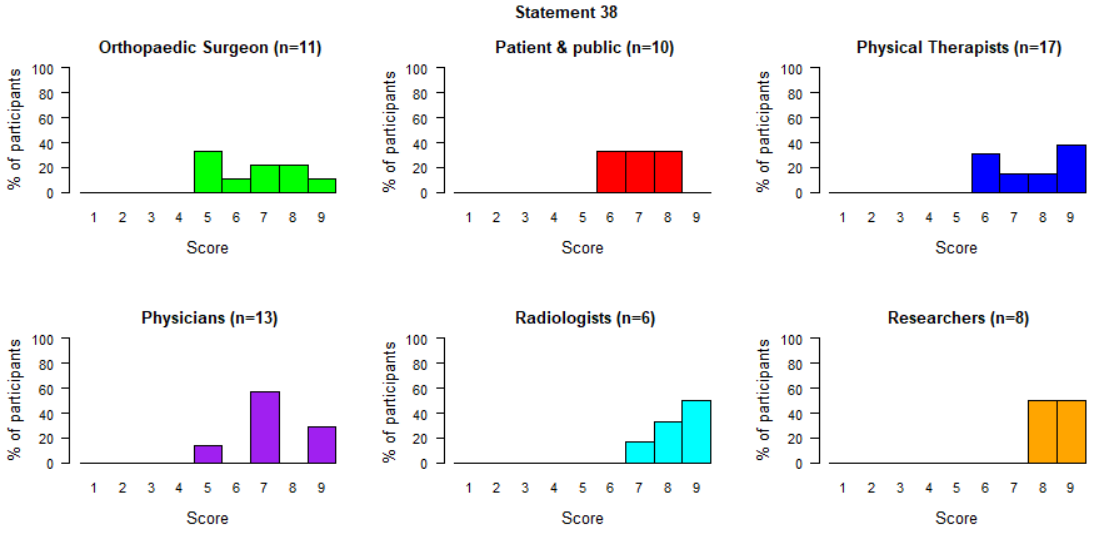
Statement 38: Referring to precisely quantifying the asphericity of the femoral head-neck junction on radial sequence magnetic resonance (MR) imaging: use either radial sequences along the axis of the femoral neck (providing higher resolution images) or radial reconstructions from 3-dimensional acquisitions

R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: Many clinicians and researchers use a clock face system to describe the location of cam morphology on radial magnetic resonance (MR) or computed tomography (CT) imaging around the axis of the femoral neck, normally 30° intervals with 12 o'clock as the superior (top) location, and 3 o'clock, 6 o'clock and 9 o'clock as the anterior, inferior (bottom) and posterior locations, respectively (when facing 'the clock').

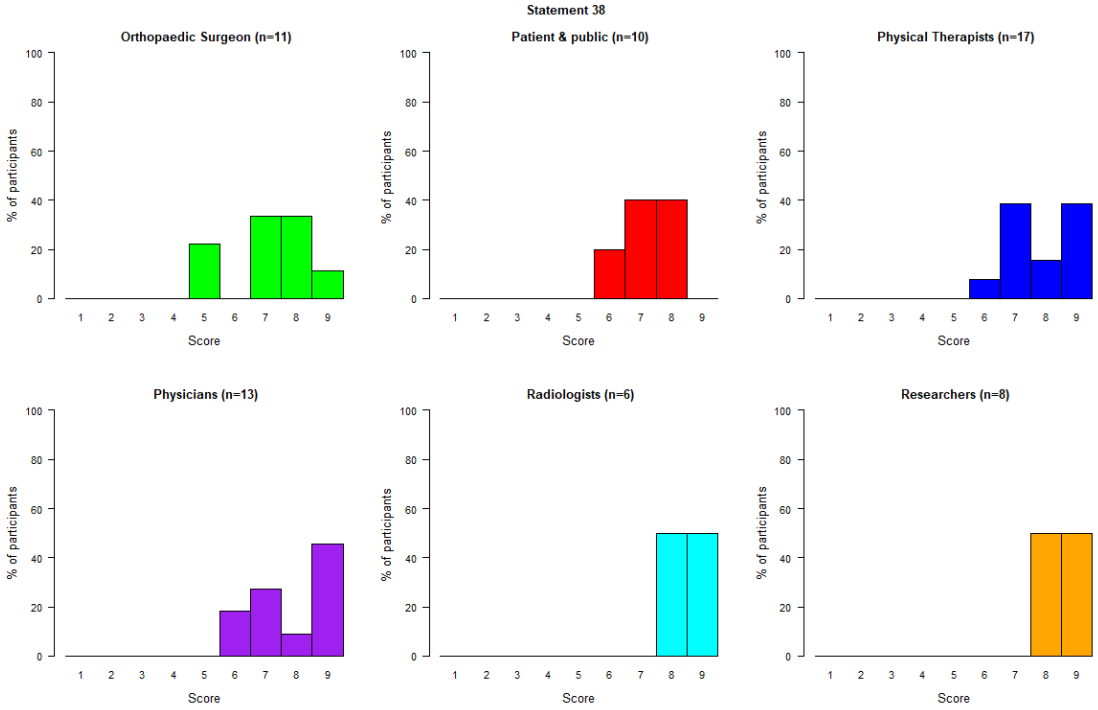
RESULTS: ROUND 1



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	8
Patient & Public In	7	6	8
Physical Therapists	8	6	9
Physicians	7	7	9
Radiologists	9	8	9
Researchers	9	8	9

Percentage panelists that scored the statement as critical	75%
Percentage panelists that scored the statement as not important	0%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	7	Important to agree on modalities
5	7	Seems appropriate imaging modality
6	7	Seems important across the cohorts.

Median, IQR

	ROUND 1			ROUND 2		
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	8	7	7	8
Patient & Public In	7	6	8	7	7	8
Physical Therapists	8	6	9	8	7	9
Physicians	7	7	9	8	7	9
Radiologists	9	8	9	9	8	9
Researchers	9	8	9	9	8	9

	Round 1	Round 2

Percentage panelists that scored the statement as critical	75%	87%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 39: The magnetic resonance (MR) imaging protocol for research on how primary cam morphology develops should include: (i) unilateral small field-of-view (FOV) sequences and radial images of a randomly selected or both hips, as well as (ii) femoral torsion assessment (fast axial sequences of the distal knee—femoral condyles—and proximal femoral neck), and (iii) a fluid sensitive sequence covering the whole pelvis (in axial or coronal planes, to screen for soft-tissue and bone marrow edema beyond the hip)

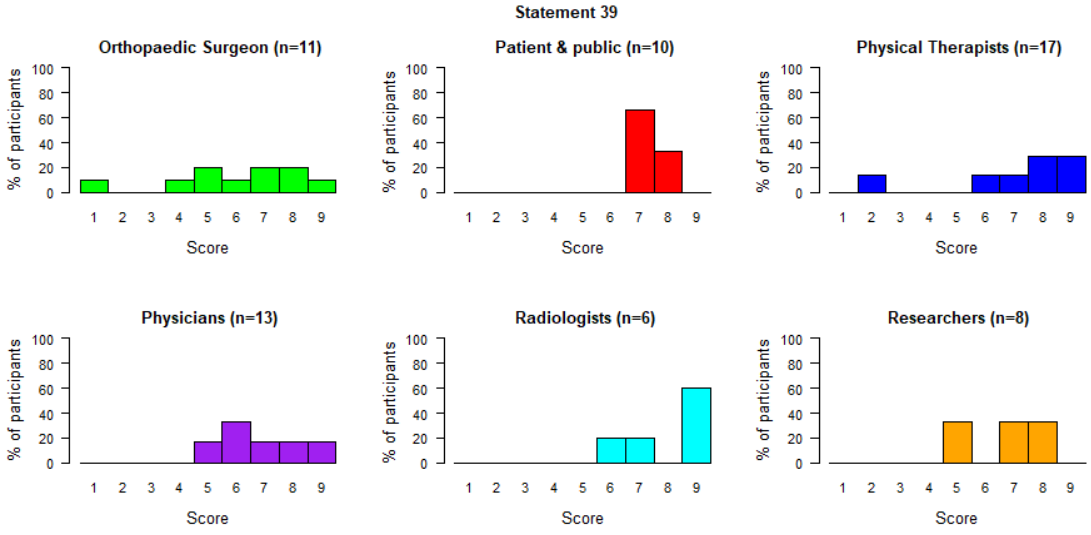
R1: NO CONSENSUS

R2: CONSENSUS IN

HELPTEXT: Small field-of-view magnetic resonance (MR) imaging (of small anatomic structures like the hip) exclude unwanted surrounding tissue (that contribute to 'noise', creating artifacts). Femoral torsion is the long-axis rotation of the femoral shaft relative to its neck in the transverse plane (the orientation of the neck of the femur in relation to the femoral condyles at the level of the knee). A torsion angle of greater than 20 degrees is considered excessive femoral anteversion, whereas a torsion angle of less than 10 degrees is considered femoral retroversion.

RESULTS: ROUND 1

1. really depends on research question; statement is too general
2. You can debate if assessment of the femoral torsion and the need for axial knee imaging.
3. Consider removing the iii) portion; because the rationale for this is to find pathological processes elsewhere besides the hip. If we want to study primary cam morphology development this might be excluded.
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. data on the role of screening for oedema elsewhere



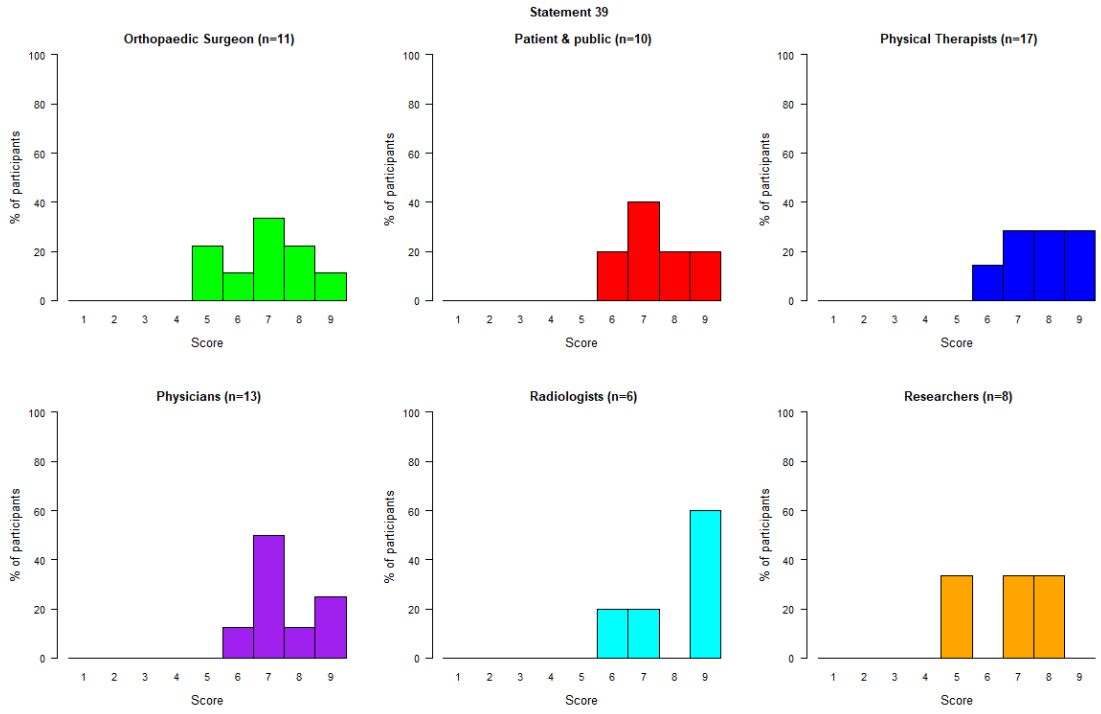
	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	8
Patient & Public In	7	7	8
Physical Therapists	8	6	9
Physicians	7	6	8
Radiologists	9	7	9
Researchers	7	5	8

Percentage panelists that scored the statement as critical	64.7%
Percentage panelists that scored the statement as not important	5.9%
RESULT	**NO CONSENSUS**

RADIOLOGISTS

Percentage panelists that scored the statement as critical	80%
Percentage panelists that scored the statement as not important	0%
RESULT	**CONSENSUS AMONGST RADIOLOGISTS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
2	7	More attention paid to imaging
6	7	As above
10	6	Second webinar informations

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	5	8	7	6	8
Patient & Public In	7	7	8	7	7	8
Physical Therapists	8	6	9	8	7	9
Physicians	7	6	8	7	7	9
Radiologists	9	7	9	9	7	9
Researchers	7	5	8	7	5	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	64.7%	78.4%
Percentage panelists that scored the statement as not important	5.9%	0%
RESULT	**NO CONSENSUS**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 40: The magnetic resonance (MR) imaging for prospective research on how primary cam morphology develops should be repeated every 18 to 24 months

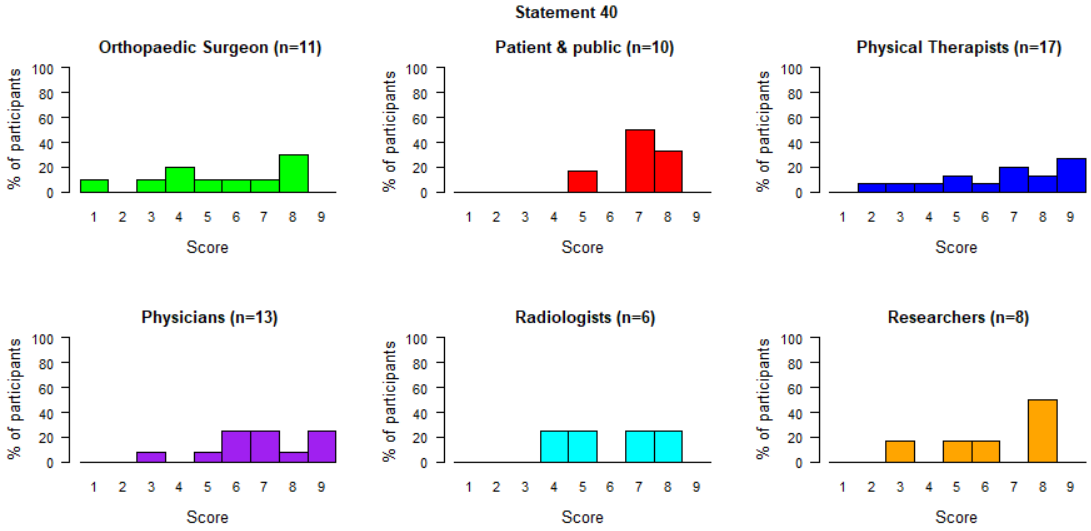
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: There is no current agreement on how often magnetic resonance (MR) imaging should be repeated in longitudinal studies to investigate how primary cam morphology develops. Longitudinal imaging studies have repeated imaging every 18 to 24 months. Consider: (1) cost, (2) logistics (including participant availability for follow-up MR imaging), (3) allowing sufficient time for morphological and other changes to occur

RESULTS: ROUND 1

1. Not specifically continous; therefore I answered these questions as a 4. **(? Meant for next statement?)**
2. really depends on research question; statement is too general
3. Do we know how quickly cam morphology develops/progresses?
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. Depends on phase of growth
6. This will depend on the research question. Timeline could for instance be required to be shorter.
7. evidence for "18-24 mo"?
8. What about more often? I know it will be difficult; but if there is a critical window that we want to identify; 2 year intervals would not be frequent enough.

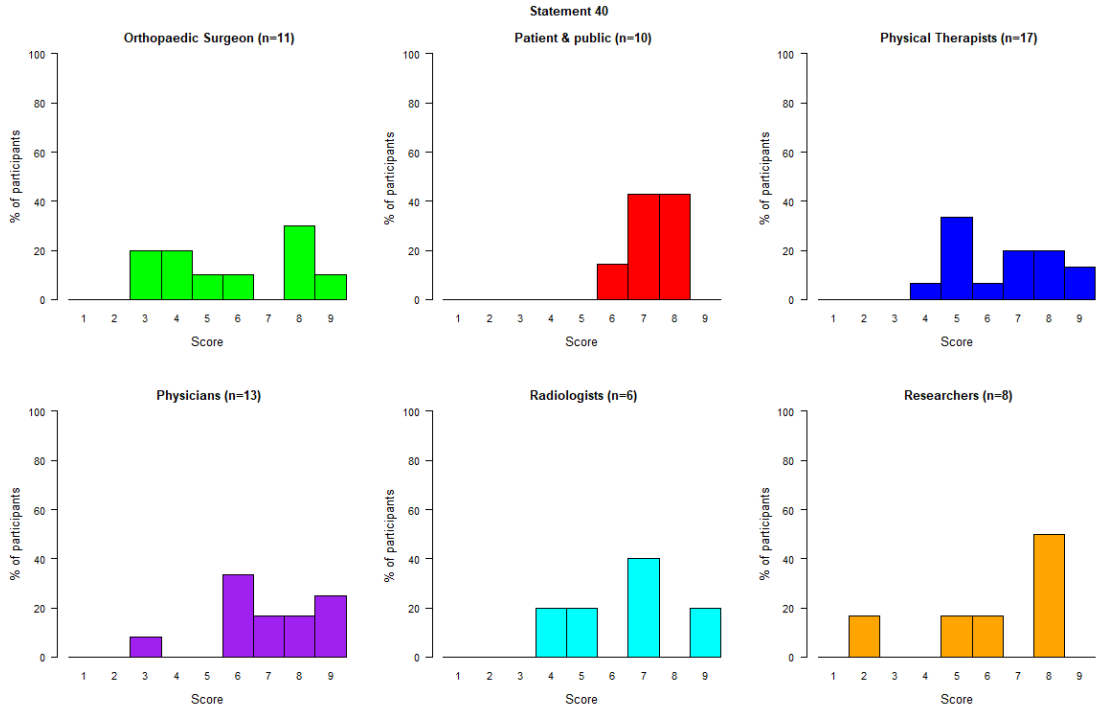


	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	4	8
Patient & Public In	7	7	8
Physical Therapists	7	5	9
Physicians	7	6	9
Radiologists	6	5	8

Researchers	7	5	8

Percentage panelists that scored the statement as critical	56.6%
Percentage panelists that scored the statement as not important	11.3%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R1

R1	R2	
3	5	I still feel this should be more frequent - but I changed for feasibility.
2	5	More attention paid to imaging
5	7	important perspective of other colleagues (radiologists)
9	5	I reduced as I think the timeframe of the imaging is likely research methods dependent and therefore there is a risk of over investigation unless we have a really clearly defined need. This seems to have come across in others rankings too.
7	5	I do not think criteria for end point have to be so specific.

Median, IQR

	ROUND 1	ROUND 2

	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	4	8	6	4	8
Patient & Public In	7	7	8	7	7	8
Physical Therapists	7	5	9	7	5	8
Physicians	7	6	9	7	6	9
Radiologists	6	5	8	7	5	7
Researchers	7	5	8	7	5	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	56.6%	56.4%
Percentage panelists that scored the statement as not important	11.3%	7.3%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 41: In primary cam morphology epidemiological research (e.g., when regression is being used in aetiology or prognosis research), continuous imaging outcome measures (variables), like the alpha angle, should be kept continuous

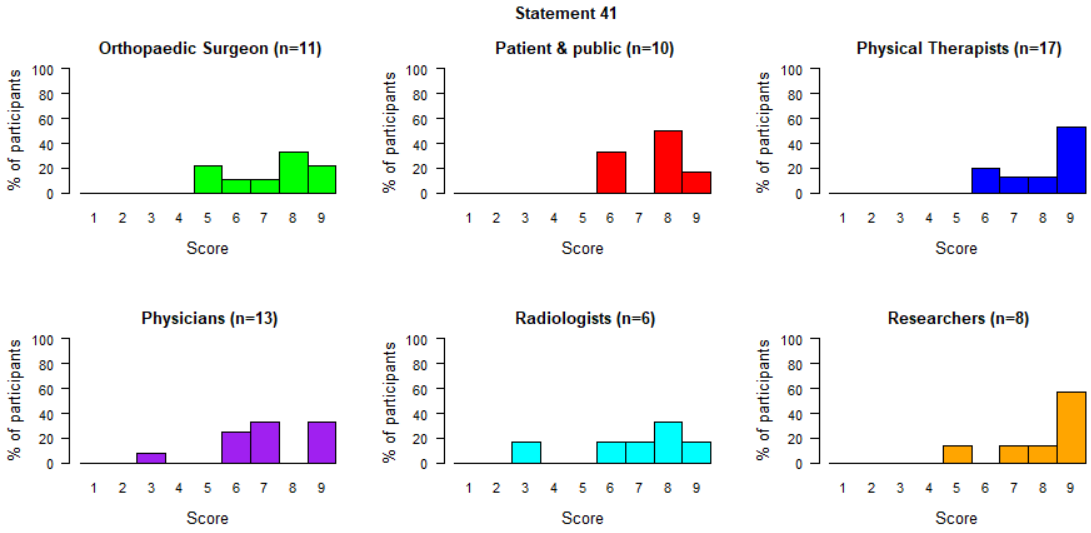
R1: CONSENSUS IN

R2: CONSENSUS IN

HELPTEXT: Three problems when dichotomising continuous variables: (1) much information is lost, so the statistical power to detect a relation between the variable and patient outcome is reduced (dichotomising a variable at the median reduces power by the same amount as would discarding a third of the data). Dichotomisation may also increase the risk of a positive result being a false positive. (2) one may seriously underestimate the extent of variation in outcome between groups, such as the risk of some event, and considerable variability may be subsumed within each group. Individuals close to but on opposite sides of the cut-point are characterised as being very different rather than very similar. (3) using two groups conceals any non-linearity in the relation between the variable and outcome. (Altman et al, 2006)

RESULTS: ROUND 1

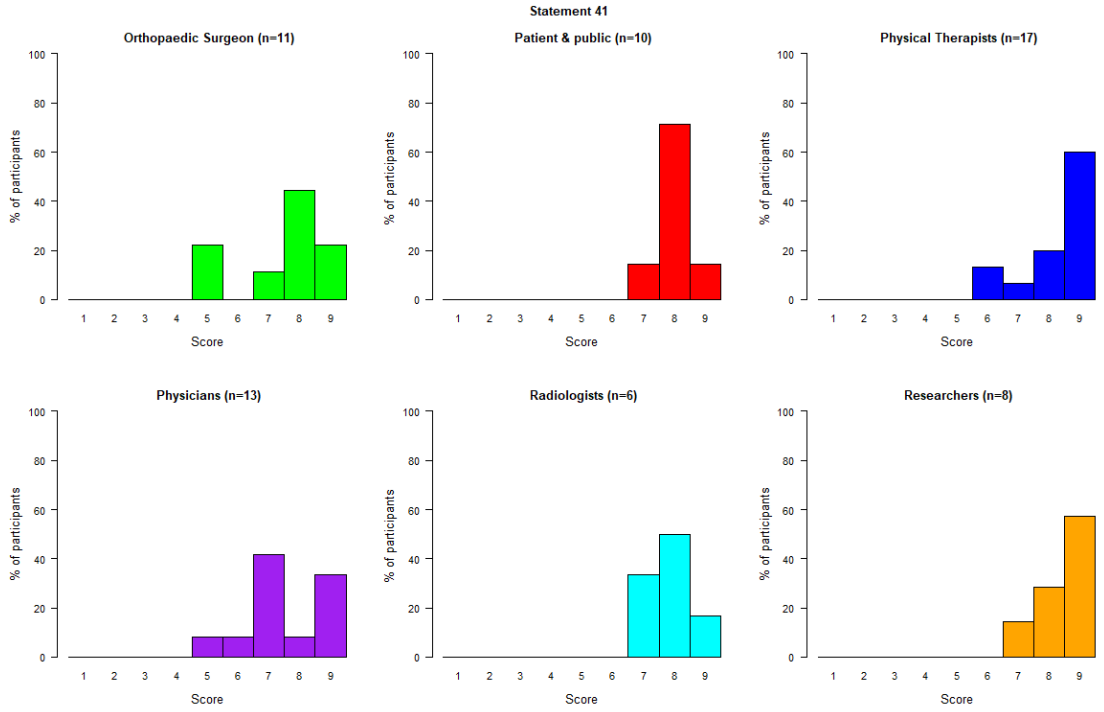
1. Not specifically continous; therefore I answered these questions as a 4.
2. really depends on research question and audience/readers; statement is too general
3. in the end to realte back to daily practice some dichotomous reporting can also help
4. There is no consensus on optimum threshold for dichotomizing this variable. It makes comparing across studies very difficult when different thresholds are used
5. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
6. From an epidemiology standpoint; yes; you dont lose information. However; I have clinicians ask to identify cut points frequently.



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	6	8
Patient & Public In	8	6	8
Physical Therapists	9	7	9
Physicians	7	6	9
Radiologists	8	6	8
Researchers	9	7	9

Percentage panelists that scored the statement as critical	72.7%
Percentage panelists that scored the statement as not important	3.6%
RESULT	**CONSENSUS IN**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	7	Mis-read the statement initially.
6	7	Input from clinical or research opinion
5	8	Ideally; all outcomes are kept continuous
6	8	Continuous variables should be continuous
6	8	Important to ensure continuous monitoring

6	7	calibration from the other disciplines
3	5	There are some reasons to keep the alpha angle continuous; but also reasons to make it dichotomous. For me half way (score 5) fits better.
6	7	Having followed webinar; I think that it is important.

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	6	8	8	7	8
Patient & Public In	8	6	8	8	8	8
Physical Therapists	9	7	9	9	8	9
Physicians	7	6	9	7	7	9
Radiologists	8	6	8	8	7	8
Researchers	9	7	9	9	8	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	72.7%	89.3%
Percentage panelists that scored the statement as not important	3.6%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

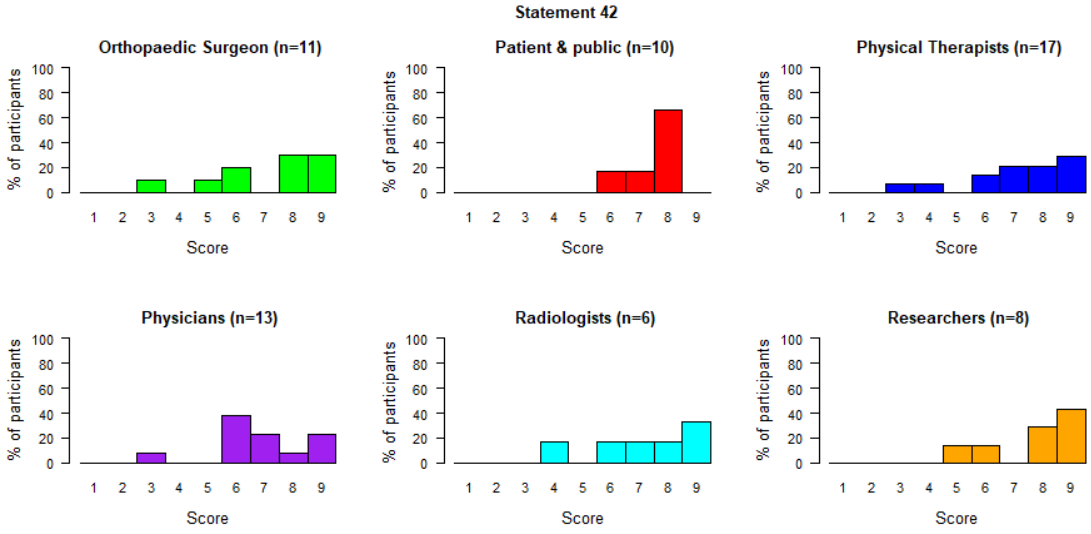
Statement 42: The cam morphology magnetic resonance (MR) imaging outcome measure for research on how primary cam morphology develops (aetiology), should be the alpha angle for bone and cartilage as a continuous variable, reported for all the o'clock locations around the femoral head-neck junction, regardless of the symptomatic state of the research participant.
R1: NO CONSENSUS

R2: CONSENSUS IN

HELPTEXT: Using the MR sequence, a circle is centred over femoral head. The alpha angle is the angle between: (1) a line parallel to the femoral neck axis, and (2) a line from the centre of the femoral head to the point where the femoral head neck junction contour exceeds the head radius. Many clinicians and researchers use a clock face system to describe the location of cam morphology on radial magnetic resonance (MR) imaging or computed tomography (CT) scan sequences around the axis of the femoral neck, normally 30° intervals with 12 o'clock as the superior (top) location, and 3 o'clock, 6 o'clock and 9 o'clock as the anterior (right), inferior (bottom) and posterior (left) locations, respectively (when facing 'the clock').

RESULTS: ROUND 1

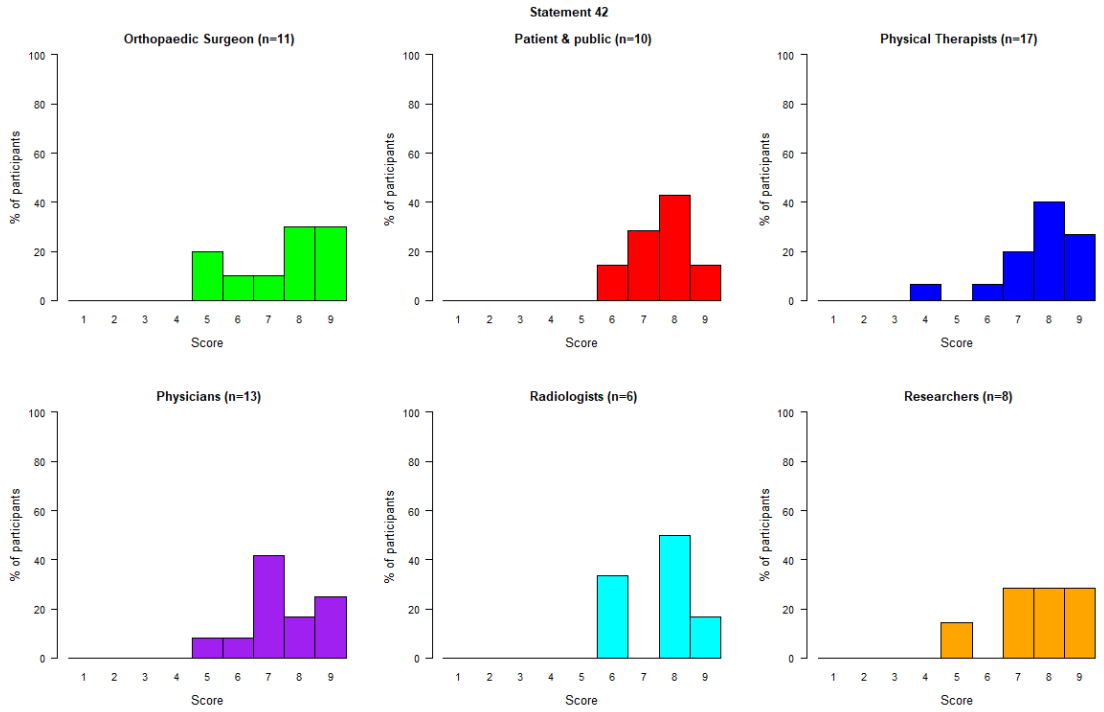
1. really depends on research question; statement is too general. all o'clock locations seem not necessary
2. Symptoms are important
3. Symptomatic/Asymptomatic should be a second variable
4. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
5. Although this appear to be relevant currently; new technologies - including for instance 3D reconstructions may provide outcome variables that are more relevant than the alpha angle.



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	8	6	9
Patient & Public In	8	7	8
Physical Therapists	8	6	9
Physicians	7	6	8
Radiologists	8	6	9
Researchers	8	6	9

Percentage panelists that scored the statement as critical	66.1%
Percentage panelists that scored the statement as not important	5.4%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	7	Current impression - Originally considered whether 3d reconstruction quantifications could be better; but this probably needs more research first.
6	7	Second webinar informations

6	7	Continuous retains better information.
6	7	Important to ensure continuous monitoring. My understanding is that sometimes pain and decrease in function does not always correlate to what is seen on a scan and this may assist to further understand this.
6	7	calibration from the other disciplines
3	5	See comment above.

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	8	6	9	8	6	9
Patient & Public In	8	7	8	8	7	8
Physical Therapists	8	6	9	8	7	9
Physicians	7	6	8	7	7	9
Radiologists	8	6	9	8	6	8
Researchers	8	6	9	8	7	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	66.1%	80.7%
Percentage panelists that scored the statement as not important	5.4%	0%
RESULT	**NO CONSENSUS**	**CONSENSUS IN**

Statement 43: For research on how primary cam morphology develops it is important to quantify the epiphyseal morphology magnetic resonance (MR) imaging outcome measure using epiphyseal extension

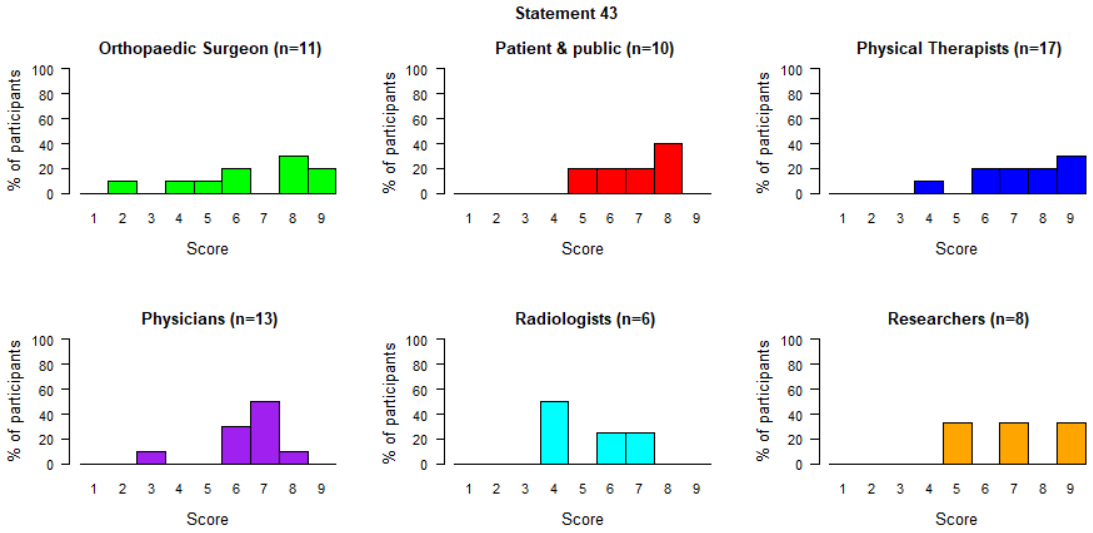
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Epiphyseal extension is the distance the epiphysis extends along the femoral neck expressed as a ratio of the femoral head diameter

RESULTS: ROUND 1

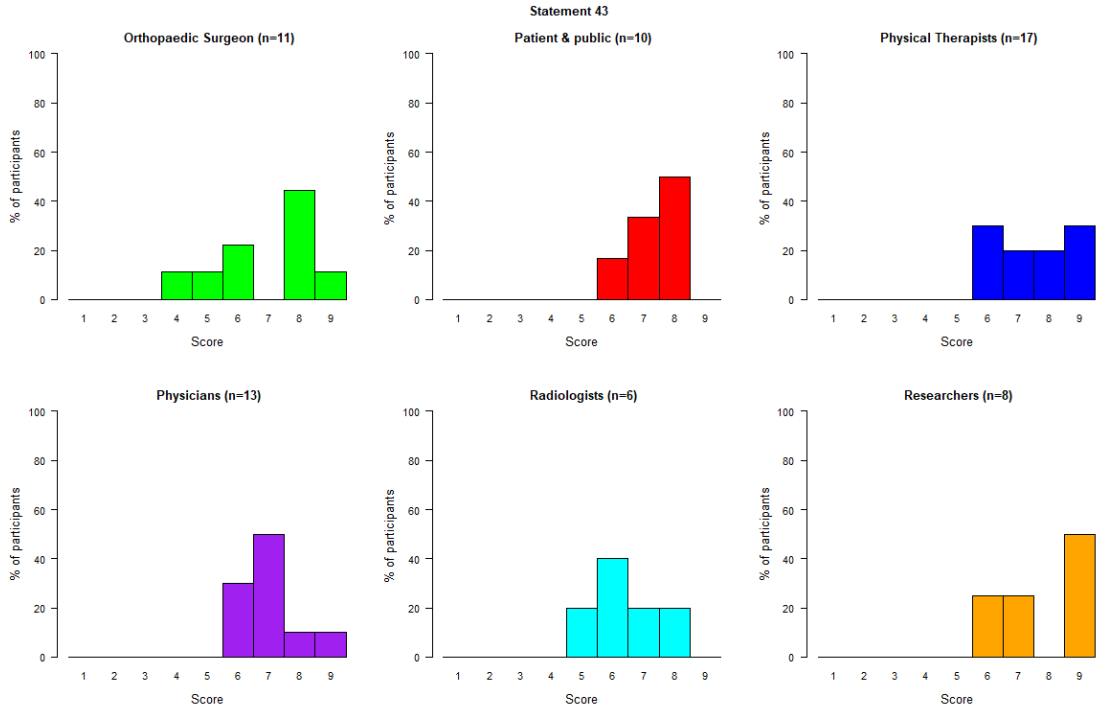
1. What is nice about this is that it can be quantified with minimal measurement error
2. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
3. Probably critical but insufficient data



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	5	8
Patient & Public In	7	6	8
Physical Therapists	8	6	9
Physicians	7	6	7
Radiologists	5	4	7
Researchers	7	5	9

Percentage panelists that scored the statement as critical	57.1%
Percentage panelists that scored the statement as not important	4.8%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	6	I usually use the alfa angle. For me; I want to highlight that this is more important than epiphyseal extension or tilt. I said the previous time 'not important' but I think it can be important.
5	7	Seems important across the cohorts.

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	5	8	8	6	8
Patient & Public In	7	6	8	8	7	8
Physical Therapists	8	6	9	8	6	9
Physicians	7	6	7	7	6	7
Radiologists	5	4	7	6	6	7
Researchers	7	5	9	8	7	9

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	57.1%	65.9%
Percentage panelists that scored the statement as not important	4.8%	0%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

No outliers

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 44: For research on how primary cam morphology develops the epiphyseal morphology magnetic resonance (MR) imaging outcome measure should also be quantified using epiphyseal tilt

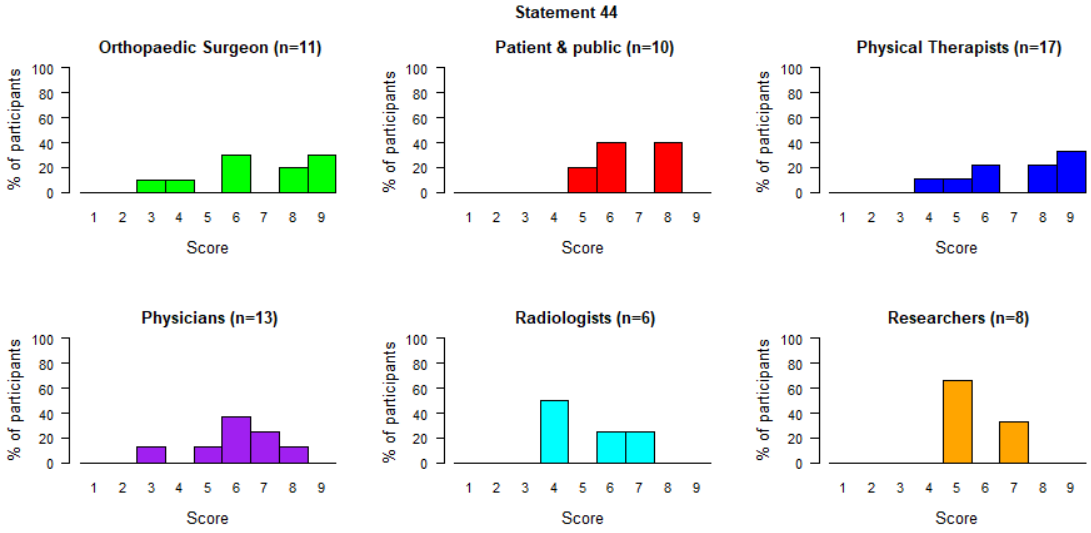
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Epiphyseal tilt measures the ratio between epiphyseal extension on opposing sides of the femoral head

RESULTS: ROUND 1

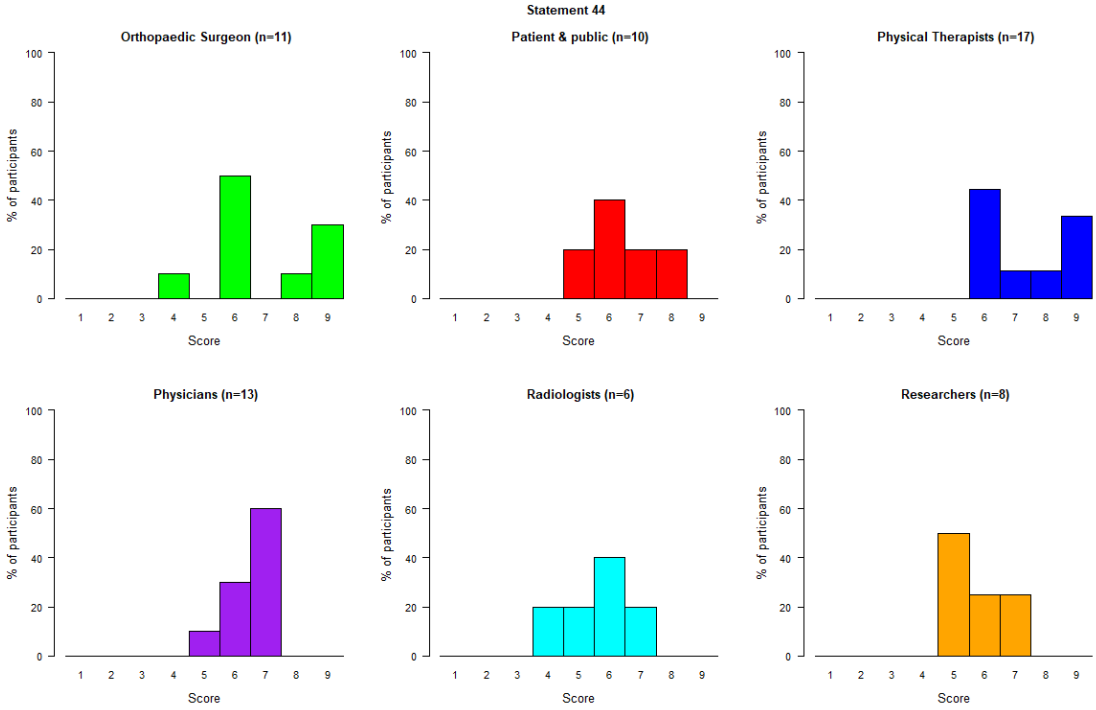
1. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
2. Possibly but again insufficient data
3. Please don't forget the genetic component in the theory of development



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	6	9
Patient & Public In	6	6	8
Physical Therapists	8	6	9
Physicians	6	6	7
Radiologists	5	4	7
Researchers	5	5	7

Percentage panelists that scored the statement as critical	43.6%
Percentage panelists that scored the statement as not important	5.1%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
3	6	I usually use the alfa angle. For me; I want to highlight that this is more important than epiphyseal extension or tilt. I said the previous time 'not important' but I think it can be important.
6	7	Second webinar informations
10	6	Following the experts; in this case the radiologists

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	6	9	6	6	9
Patient & Public In	6	6	8	6	6	7
Physical Therapists	8	6	9	7	6	9
Physicians	6	6	7	7	6	7
Radiologists	5	4	7	6	5	6
Researchers	5	5	7	6	5	7

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	43.6%	44.2%
Percentage panelists that scored the statement as not important	5.1%	0%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Statement 45: The main imaging modality for longitudinal primary cam morphology prognosis research should be anteroposterior (AP) pelvis and Dunn 45° view radiographs repeated at least every 5 years

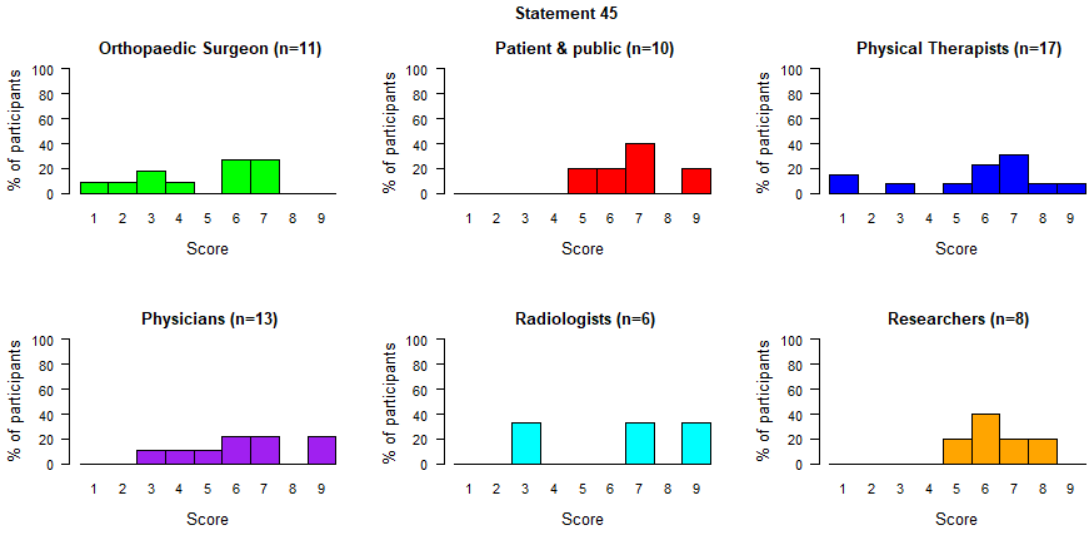
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Femoral head-neck asphericity is most often localised in the anterosuperior region, and usually best shown on a radiographic view with the hips in 45° of flexion and 20° of abduction (Dunn 45° view)

RESULTS: ROUND 1

1. Would suggest frog-leg lateral or Dunn.
2. any lateral head-neck views; also dependent where the particular cnetre is familiar with
3. tough with sweeping statment - advantge of x-ray is cheap and little time costs; but radiation and less detail - so depends on exact question
4. Prefer MRI with all clock positions
5. Again; don't feel qualified to answer these statements because I don't know how MRIs are conducted --but standardizing the imaging and radiographs across research seems important
6. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
7. If after closure of growth plate; long term study -> X-Ray. Otherwise for research MRI
8. I think the evidence is already beyond such approach
9. evidence for "5y"?



	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	3	7
Patient & Public In	7	6	7
Physical Therapists	6	5	7
Physicians	6	5	7
Radiologists	7	3	9

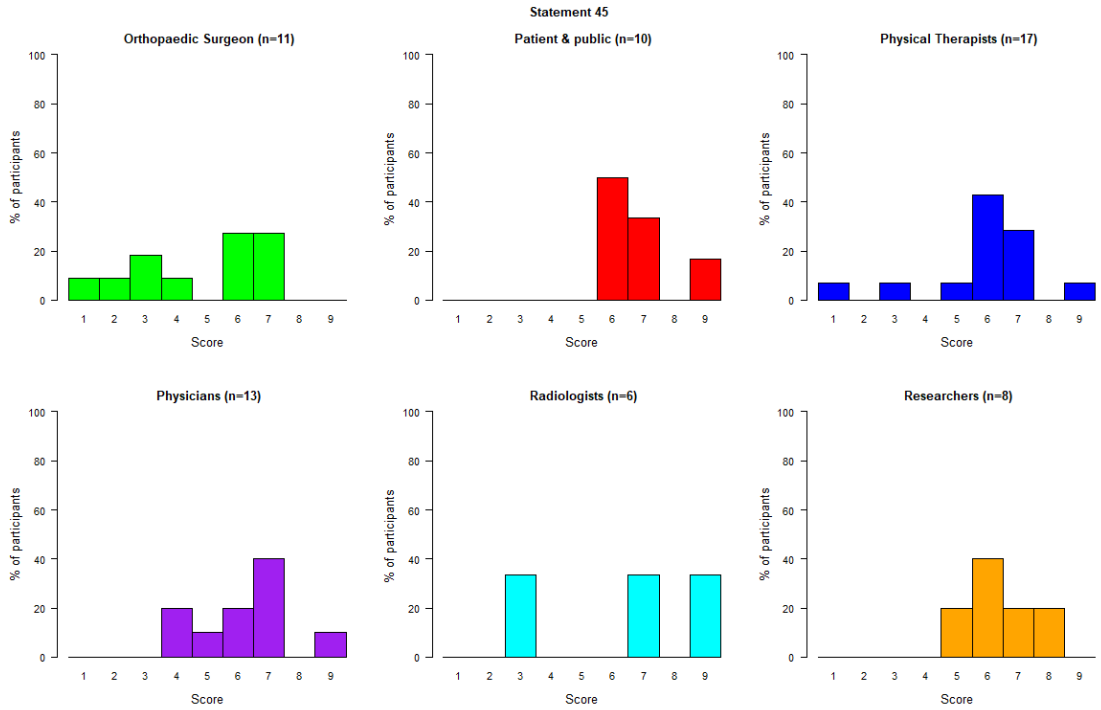
Researchers	6	6	7

Percentage panelists that scored the statement as critical	44.9%
Percentage panelists that scored the statement as not important	20.4%
RESULT	**NO CONSENSUS**

RADIOLOGISTS

Percentage panelists that scored the statement as critical	66.7%
Percentage panelists that scored the statement as not important	33.3%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
1	6	This is a mistake - I do nok think we should take radiographs every five years.
8	6	This depends on if you are talking about using radiographs to monitor joint disease progression (i.e. OA features) in young people with cam morphology. MRI would be better in this type of study;
10	6	Recognised my slight error (marked too high) in the initial scoring

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	6	3	7	6	3	7
Patient & Public In	7	6	7	7	6	7
Physical Therapists	6	5	7	6	6	7
Physicians	6	5	7	7	5	7
Radiologists	7	3	9	7	3	9
Researchers	6	6	7	6	6	7

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	44.9%	42.3%
Percentage panelists that scored the statement as not important	20.4%	15.4%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

RADIOLOGISTS

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	66.7%	66.7%
Percentage panelists that scored the statement as not important	33.3%	33.3%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Dijkstra HP, *et al. Br J Sports Med* 2023; 57:324–340. doi: 10.1136/bjsports-2022-106085

Statement 46: The radiographic imaging outcome measure for research on primary cam morphology prognosis should be the alpha angle as a continuous variable reported for anteroposterior (AP) pelvis and Dunn 45° view radiographs.

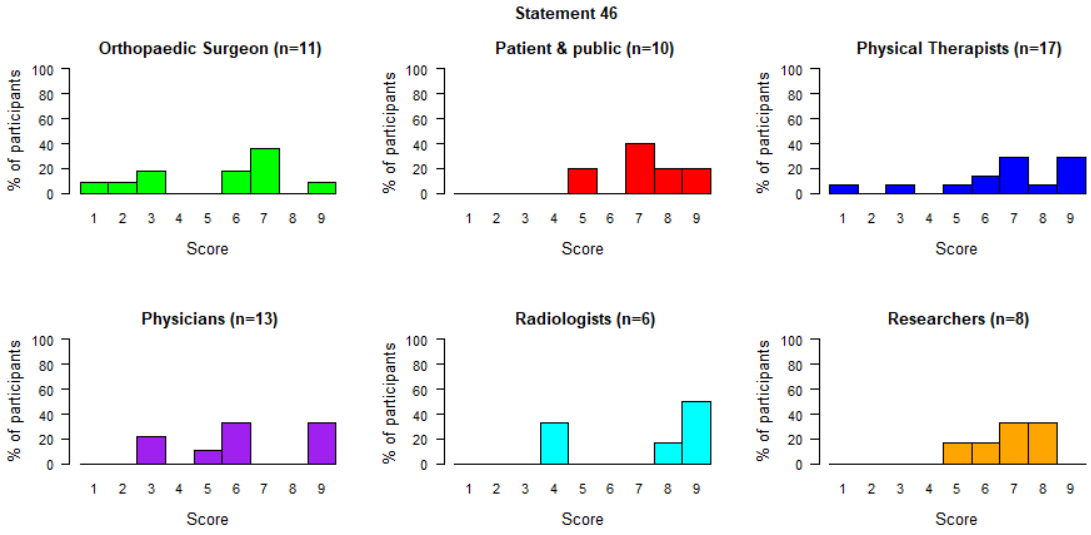
R1: NO CONSENSUS

R2: NO CONSENSUS

HELPTEXT: Alpha angle: Using the radiographs, a circle is centred over femoral head. The alpha angle is the angle between: (1) a line parallel to the femoral neck axis, and (2) a line from the centre of the femoral head to the point where the femoral head neck junction contour exceeds the head radius

RESULTS: ROUND 1

1. Prefer MRI with all clock positions
2. I do not agree that the concept of Primary and secondary CAM is commonly agreed and established
3. AP too imprecise



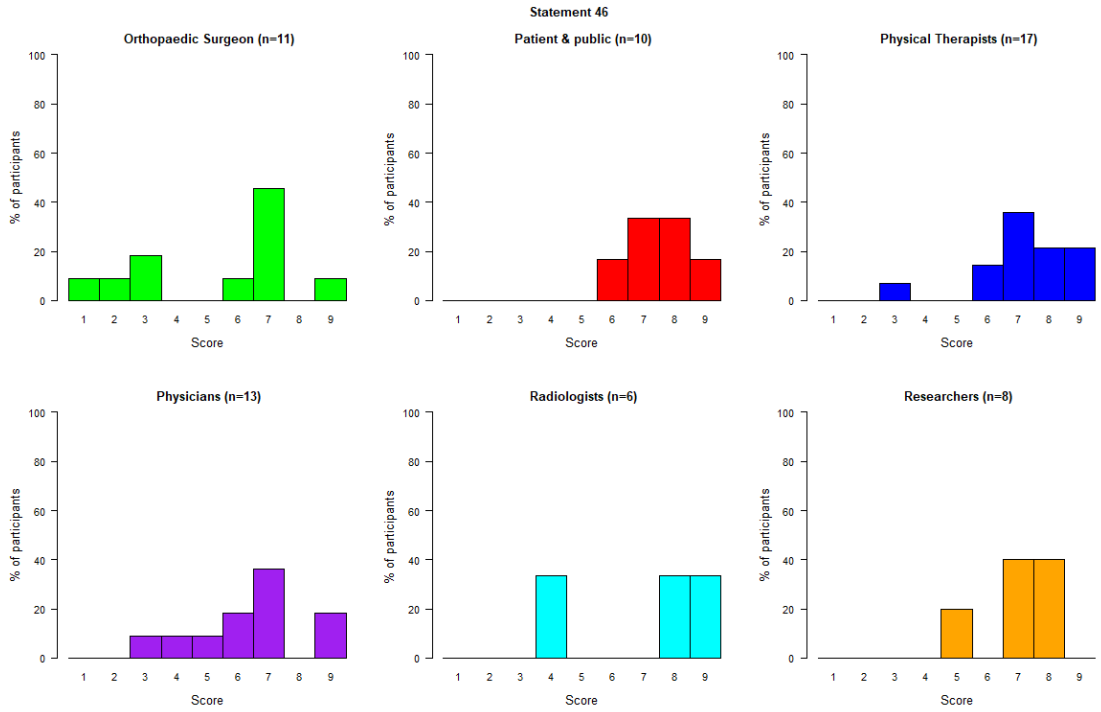
	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	6	3	7
Patient & Public In	7	7	8
Physical Therapists	7	6	9
Physicians	6	5	9
Radiologists	9	4	9
Researchers	7	6	8

Percentage panelists that scored the statement as critical	56.9%
Percentage panelists that scored the statement as not important	15.7%
RESULT	**NO CONSENSUS**

RADIOLOGISTS

Percentage panelists that scored the statement as critical	66.7%
Percentage panelists that scored the statement as not important	0%
RESULT	**NO CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
5	7	Strength of agreement of others increased my confidence
1	6	This is a mistake - I do not think we should take radiographs in young adults.
6	8	important perspective of other colleagues (radiologists)

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	6	3	7	7	3	7

Patient & Public In	7	7	8	8	7	8
Physical Therapists	7	6	9	7	7	8
Physicians	6	5	9	7	5	7
Radiologists	9	4	9	8	4	9
Researchers	7	6	8	7	7	8

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	56.9%	67.9% (70.6%)
Percentage panelists that scored the statement as not important	15.7%	11.3% (7.8%)
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

* adjusted percentage after removing 2 outliers from round 2 are in brackets

RADIOLOGISTS

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	66.7%	66.7%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**NO CONSENSUS**	**NO CONSENSUS**

Statement 47: In addition to reporting alpha angles as continuous in studies on aetiology or prognosis, the following quantitative and qualitative imaging outcome measures, to categorise cam morphology, can be useful in research or clinical practice: (i) Alpha angle ≥ 60° (preferred) (ii) Head-neck offset < 8mm AND head-neck offset ratio ≤ 0.15 usually at the anterior (3 o'clock) location around the femoral head-neck junction (in addition to (i)); Osseous or cartilage convexity of the femoral head neck junction at any location (in addition to (i) and (ii))

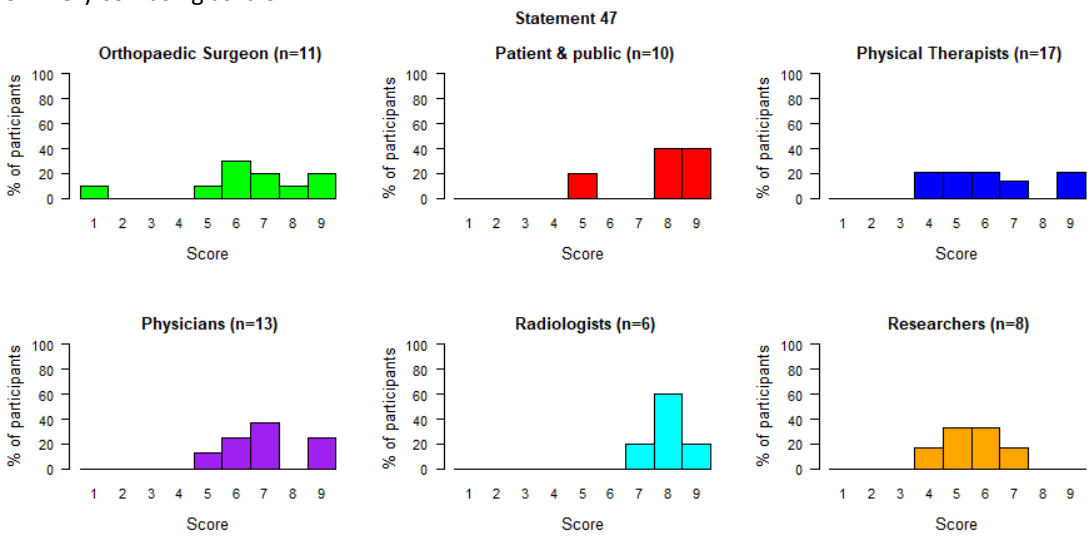
R1: NO CONSENSUS

R2: CONSENSUS IN

HELPTEXT: Alpha angle: Using the hip imaging, a circle is centred over femoral head. The alpha angle is the angle between: (1) a line parallel to the femoral neck axis, and (2) a line from the centre of the femoral head to the point where the femoral head neck junction contour exceeds the head radius. Head-neck offset is the difference (o) between the femoral head radius (r) and the neck radius; the head-neck offset ratio represents the ratio of offset (o) to the femoral head radius (r). Many clinicians and researchers use a clock face system to describe the location of cam morphology on radial magnetic resonance (MR) imaging or computed tomography (CT) scan sequences around the axis of the femoral neck, normally 30° intervals with 12 o'clock as the superior (top) location, and 3 o'clock, 6 o'clock and 9 o'clock as the anterior (right), inferior (bottom) and posterior (left) locations, respectively (when facing 'the clock').

RESULTS: ROUND 1

1. I would take care in allowing too many additional measurement options that may introduce confusion to the definition/taxonomy. By all means discuss them but I wonder if this needs to be tightened further to avoid potential confusion over what is/is not suggested for future research studies.
2. I would change AND to OR. Please be aware that the statements imply a lot of multiple testing with each type of measurement and each location of measurement having their uncertainty. I would advocate not using too much different measures and not too much locations.
3. perhaps more important in clinical practice to aid with decision making.
4. I would suggest that section 2 is not critical since it's not a reliable tool for assessing CAM morphology.
5. very confusing as it is



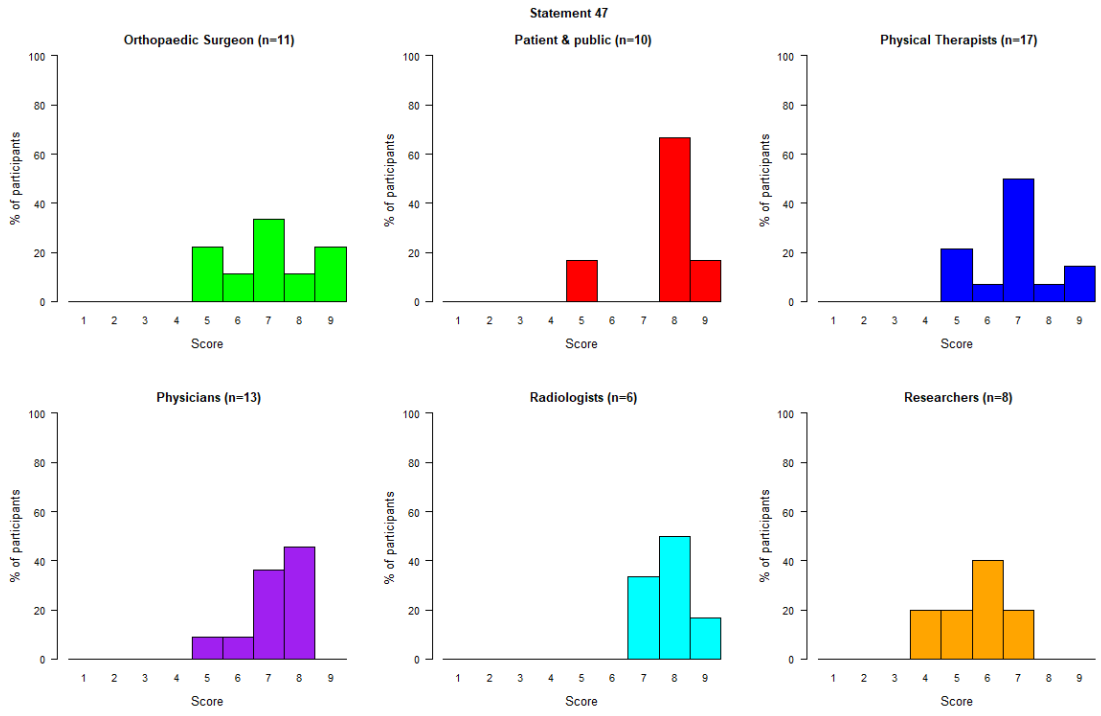
	Median	Percentile 25	Percentile 75
Orthopaedic Surgeon	7	6	8
Patient & Public In	8	8	9
Physical Therapists	6	5	7
Physicians	7	6	8
Radiologists	8	8	8
Researchers	6	5	6

Percentage panelists that scored the statement as critical	52.1%
Percentage panelists that scored the statement as not important	2.1%
RESULT	**NO CONSENSUS**

RADIOLOGISTS

Percentage panelists that scored the statement as critical	100%
Percentage panelists that scored the statement as not important	0%
RESULT	**CONSENSUS**

RESULTS: ROUND 2



Reasons for score boundary changes between R1 and R2

R1	R2	
6	7	Strength of agreement of others increased my confidence
5	10	I am uncertain on the specific research values
6	7	I scored this down in the first round due to the complexity of the statement and I still think it is too wordy; but if taken step by step I think it is more important
4	7	More attention paid to imaging
5	10	not confident that I fully understood the question
6	7	important perspective of other colleagues (radiologists)

Median, IQR

	ROUND 1			ROUND 2		
	Median	**Percentile 25**	**Percentile 75**	**Median**	**Percentile 25**	**Percentile 75**
Orthopaedic Surgeon	7	6	8	7	6	8
Patient & Public In	8	8	9	8	8	8
Physical Therapists	6	5	7	7	6	7
Physicians	7	6	8	7	7	8
Radiologists	8	8	8	8	7	8
Researchers	6	5	6	6	5	6

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	52.1%	72.5%
Percentage panelists that scored the statement as not important	2.1%	0%
RESULT	**NO CONSENSUS**	**CONSENSUS IN**

RADIOLOGISTS

	Round 1	**Round 2**
Percentage panelists that scored the statement as critical	100%	100%
Percentage panelists that scored the statement as not important	0%	0%
RESULT	**CONSENSUS IN**	**CONSENSUS IN**

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