

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

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MEDIDEA, L.L.C.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil No. 17-11172-LTS
	)	
DEPUY ORTHOPAEDICS, INC. et al.,	)	
	)	
Defendants.	)	
_____	)	

MEMORANDUM AND ORDER ON CLAIM CONSTRUCTION

November 7, 2018

SOROKIN, J.

In this intellectual property dispute, MedIdea, L.L.C., alleges that DePuy Orthopaedics, Inc., DePuy Synthes Products, Inc., and DePuy Synthes Sales, Inc. d/b/a DePuy Synthes Joint Reconstruction (collectively, “DePuy”) are directly and wilfully infringing its patents via the sale of Attune® knee replacement systems. The four patents-in-suit are: United States Patent Numbers 6,558,426 (“the ’426 patent”), 8,273,132 (“the ’132 patent”), 8,721,730 (“the ’730 patent”), and 9,492,280 (“the ’280 patent”). DePuy has counter-sued, seeking declarations of invalidity and non-infringement. Pending now are the parties’ briefs on claim construction. The Court has reviewed all relevant submissions and held a hearing on October 25, 2018, pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), at which it heard oral argument and technology tutorials.

I. BACKGROUND

The parties dispute the proper construction of terms appearing in twelve claims disclosed in the four patents-in-suit. Each of the patents is entitled “Multiple-Cam, Posterior-Stabilized

Knee Prosthesis,” each names the same inventor (Dr. Michael A. Masini), and each shares a common specification.<sup>1</sup> See generally Doc. Nos. 92-2, 92-3, 92-4, 92-5.<sup>2</sup> The patents generally relate to total knee replacement (“TKR”) implants featuring cam-and-post designs. MedIdea is the assignee of Dr. Masini’s patents, including the patents-in-suit. DePuy produces and sells TKR implants, including the Attune system, which is the accused product in this action. Doc. No. 26 ¶¶ 15, 17, 19, 26-29, 37, 48, 65, 79.

The ’426 patent, filed in 2000, endeavors “to facilitate a more normal rollback while inhibiting initial translation which could lead to increased wear and sub-optimal . . . mechanics” by incorporating “additional points of cam action” beyond what was provided by then-existing cam-and-post systems. Doc. No. 92-2 at 1. Claim 9 of the ’426 patent discloses:

A *distal* femoral knee-replacement component configured for use with a tibial component . . . , the distal femoral component comprising:

a body having a pair of medial and lateral condylar protrusions and an intercondylar region therebetween dimensioned to receive the tibial post; and

a structure providing more than one physically separate and discontinuous *points of cam action* as the knee moves from extension to flexion.

Id. at 8 (emphasis added).

The ’132 patent, filed in 2003 as a divisional of the ’426 patent, emphasizes the use of “interconnected structural elements such as cam extensions to prevent early translation of the knee or dislocation of the femoral component over the tibial post which can occur” in prior-art systems. Doc. No. 92-3 at 1. Four claims from this patent are at issue here, but independent claim 6 is representative, and it discloses:

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<sup>1</sup> The Field, Background, Summary, and Detailed Description of the Invention are identical in all four patents. The Abstracts vary, and the three later patents contain additional diagrams.

<sup>2</sup> Citations to “Doc. No. \_\_\_\_” reference documents appearing on the court’s electronic docketing system; pincites are to the page numbers in the ECF header.

A total knee replacement system comprising:

a tibial component having . . . a tibial post . . . ;

a *distal* femoral component having an intercondylar region configured to receive the tibial post . . . ; and

*a member on the distal femoral component bridging the intercondylar region, the member including:*

a first, convex *cam* surface that engages with the posterior surface of the tibial post following the onset of flexion, and

*a cam extension with a second cam action surface that initially engages with the posterior surface of the tibial post beyond 90 degrees of flexion, to minimize dislocation over the tibial post; and*

an intermediate surface portion between the first and second *cam action surfaces* that does not make contact with the tibial post.

Id. at 10 (emphasis added).

The '730 patent, filed in 2008 as a continuation of the '132 patent, concerns the same “interconnected structural elements,” or “cam extensions.” Doc. No. 92-4 at 1. Five claims are at issue, including dependent claim 18. That claim discloses a TKR system similar to the one described in claim 6 of the '132 patent (set forth above), except that the final clause does not include a “no contact” limitation, and it adds following requirement:

an additional *cam extension* with a *cam action point* projects *distally* toward a tibial articulating surface when the knee is in extension and contacts the posterior surface of the tibial post *early after the initiation of flexion* to minimize early translation of a femur relative to a tibia.

Id. at 10 (emphasis added).

Finally, the '280 patent, filed in 2014 as a continuation of the '730 patent, focuses on the use of curved tibial posts and “cam mechanisms.” Doc. No. 92-5 at 1. Both of the patent’s two claims are at issue. Independent claim 1 discloses:

A total knee replacement system, comprising:

a tibial component having a tibial post . . . ;

a femoral component . . . including an intercondylar femoral *cam mechanism* configured to articulate with the posterior surface of the tibial post;

wherein a majority of the posterior surface of the tibial post is concave in a sagittal plane, defined as a vertical plane extending from front to back;

wherein the *cam mechanism of the femoral component has a superior convex portion, a concave central portion, and an inferior convex posterior portion*;

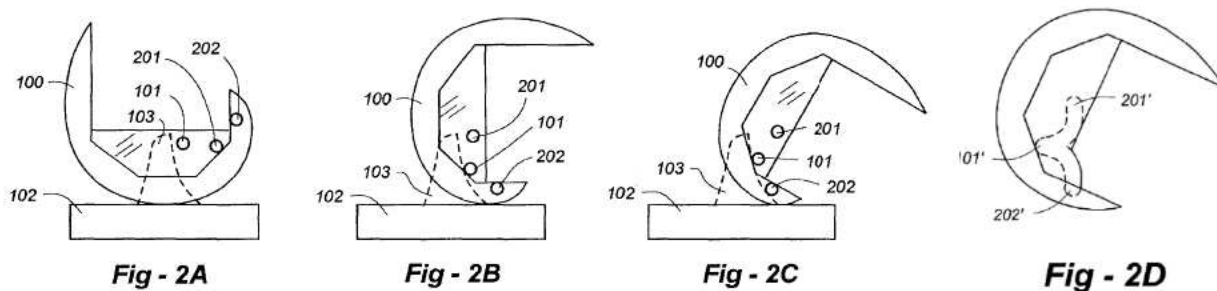
wherein the inferior convex posterior portion contacts the posterior surface of the tibial post at or before 90 degrees of flexion;

wherein at least a portion of the posterior surface of the tibial post is convex in a transverse (horizontal) plane; and

wherein at least a portion of the *cam mechanism* of the femoral component is concave in the transverse (horizontal) plane.

Id. at 15 (emphasis added).

The drawings below appear in each of the patents-in-suit as figures 2A through 2D. E.g., Doc. No. 92-2 at 3-4. They depict side views of one or both components of a TKR system. The



first three figures illustrate “a preferred embodiment of the invention,” including both the femoral component and the tibial post. Id. at 7. Figure 2A shows the components when the knee is “in extension,” 2B shows “90 degrees flexion,” and 2C shows “flexion at 120 degrees or more.” Id. Figure 2D depicts a femoral component which features the “use of interconnected cams with physically separate contact points”; the curved structure partially outlined with dotted lines is a “cam mechanism.” Id. In all four figures, the points marked 101, 201, and 202—with or without the prime (') symbol—are the “physically separate contact points” or “points of cam action” which interact with the tibial post at different times during the bending of the knee. Id.;

Doc. No. 93-12 at 3; see Doc. No. 97 at 4 (characterizing figure 2D as depicting a “single unitary cam structure with multiple cam action surfaces”).

The parties ask the Court to construe thirteen terms relating to the components of a TKR system such as the one depicted in figure 2D, and they quarrel over whether several additional terms are indefinite. The Court will address each disputed term below.

## II. LEGAL STANDARD

The “construction of a patent, including terms of art within its claim, is exclusively within the province of the court.” Markman, 517 U.S. at 372. “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quotation marks omitted). The claim itself is “of primary importance, in the effort to ascertain precisely what it is that is patented.” Merrill v. Yeomans, 94 U.S. 568, 570 (1876); accord Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 339 (1961); Phillips, 415 F.3d at 1312. Because as a general matter, “claims, not specification embodiments, define the scope of patent protection,” a patentee is not limited “to his preferred embodiment,” and “a limitation from the specification” cannot be imported “into the claims.” Kara Tech. Inc. v. Stamps.com Inc., 582 F.3d 1341, 1348 (Fed. Cir. 2009).

“[T]he words of a claim are generally given their ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” Phillips, 415 F.3d at 1312-13 (quotation marks omitted). Sometimes “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction . . . involves little more than the application of the widely accepted meaning of commonly understood words.” Id. at 1314.

Other times, though, when “the meaning of a claim term as understood by persons of skill in the art is . . . not immediately apparent,” or when “patentees . . . use terms idiosyncratically,” a court must consider “those sources available to the public” which shed light on how “a person of skill in the art would have understood [the] disputed claim language.” Id. (quotation marks omitted).

A “person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” Id. at 1313. Indeed, intrinsic evidence—the language appearing in the claims and elsewhere in the patent itself, as well as any available prosecution history of the patent—is the most reliable and useful evidence in determining the meaning of a patent’s claims. Id. at 1317-19; see Advanced Fiber Techs. Tr. v. J&L Fiber Servs., Inc., 674 F.3d 1365, 1372 (Fed. Cir. 2012) (encouraging consideration of “prosecution history, which, like the specification, provides evidence of how the PTO and the inventor understood the claimed invention”). “[I]f the . . . prosecution history defines a claim term, that definition shall apply even if it differs from the term’s ordinary meaning.” Advanced Fiber, 674 F.3d at 1372.

Extrinsic evidence, including expert and inventor testimony, dictionaries, and treatises, may aid in understanding the underlying technology, how the invention works, and whether “a particular term . . . has a particular meaning in the pertinent field.” Id.; accord Markman v. Westview Instruments, Inc., 52 F.2d 967, 980 (Fed. Cir. 1995). Although a court may consider extrinsic evidence to the extent it is useful, it may not rely on such evidence to “change the meaning of claims in derogation of the” intrinsic evidence of record. Phillips, 415 F.3d at 1319.

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” Nautilus, Inc. v. Biosig Instruments, Inc., 134

S. Ct. 2120, 2124 (2014). The burden is on the party challenging a patent to demonstrate indefiniteness by clear and convincing evidence. See Microsoft Corp. v. i4i Ltd. P’ship, 564 U.S. 91, 95 (2011). “Indefiniteness . . . is a question of law” governed by “the same principles that generally govern claim construction.” Praxair, Inc. v. ATMI, Inc., 543 F.3d 1306, 1319 (Fed. Cir. 2008). In some circumstances, courts decline to resolve questions of indefiniteness at the claim construction stage of litigation, deferring them until summary judgment when a fuller record is available. E.g., Indus. Tech. Research Inst. v. LG Elecs. Inc., No. 13-2016, 2014 WL 6907449, at \*3 (S.D. Cal. Dec. 8, 2014); Int’l Dev. LLC v. Richmond, No. 09-2495, 2010 WL 4703779, at \*6-7 (D.N.J. Nov. 12, 2010).

### III. DISCUSSION

Guided by these principles—and having carefully reviewed the language of each relevant patent in its entirety, all cited prosecution history, and any extrinsic evidence proffered by either party—the Court will address each of the disputed terms in turn.

#### A. Cam

The patents-in-suit relate to TKR systems involving so-called “cam-and-post” designs. The term “cam” appears throughout the patents, either on its own or as part of a longer term. The claims excerpted in the Background section above provide examples. Some longer terms including the word “cam” will be separately defined below. MedIdea suggests that “cam” need not be construed on its own, as it will be discussed extensively at trial, the plain and ordinary meaning can be discerned and applied, and each time the word appears it is accompanied by a modifier that informs its meaning. Doc. No. 92 at 10; Doc. No. 92-1 at 1. In the alternative, MedIdea does not object to the definition proposed by DePuy: “a structure that makes sliding or rolling contact with the tibial post as the knee bends.” Doc. No. 92-1 at 1.

The Court adopts DePuy’s proposed construction. “Cam” is not a term with which laypeople are likely to be familiar, and it will be critical for the factfinders in this case to understand this word which is central to the types of TKR systems at issue here. No matter how extensively trial witnesses might discuss the term “cam,” it is not the jury’s role, but the Court’s exclusive obligation, to construe a patent’s terms. Markman, 517 U.S. at 372. DePuy’s proposal is consistent with the intrinsic record, and MedIdea agrees it accurately defines the term for purposes of this case. Accordingly, the Court construes “cam” to mean “a structure that makes sliding or rolling contact with the tibial post as the knee bends.”

**B. Cam Action Surface; Point of Cam Action; Cam Action Point**

One or more of the terms “cam action surface,” “point of cam action,” and “cam action point,” appear throughout three of the patents-in-suit.<sup>3</sup> In their papers, both parties agreed that the three terms should be construed to have one common meaning.<sup>4</sup> Doc. No. 92-1 at 1; Doc. No. 93 at 23. MedIdea urges the Court not to construe these terms, suggesting they “have a plain and ordinary meaning and do not require construction.” Doc. No. 92 at 13. Alternatively, MedIdea deems “acceptable” (at least as to the first of the three terms) DePuy’s proposed definition: “the surface of a cam that contacts the post.” Doc. No. 92-1 at 1.

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<sup>3</sup> None of these terms appear in the claims of the ’280 patent, though they are included in the specification that patent shares with its three predecessors. The terms appear in both singular and plural forms in the patents-in-suit. A definition for the plural form can easily be derived from the Court’s construction of the singular.

<sup>4</sup> According to MedIdea’s opening brief, the terms “are closely related,” with the latter two terms “simply referenc[ing]” particular “cam action surfaces” designated by numbers in the patents’ drawings. Doc. No. 92 at 13. MedIdea appeared to change this position during the claim construction hearing, at one point arguing that a single “cam” could have multiple “cam action surfaces,” and that a single “cam action surface” in turn could have multiple “points of cam action.” This seemed to reflect an extemporaneous evolution in thinking by MedIdea’s counsel, but did not amount to an explicit disavowal of the positions taken throughout MedIdea’s briefing, nor did it include a revised proposed definition of any of the relevant terms. As such, the Court declines to adopt MedIdea’s eleventh-hour view of these terms.



The Court adopts DePuy’s proposed construction as to all three related terms. The Court is not only empowered, but required, to construe patent terms when the parties disagree as to their meaning. Markman, 517 U.S. at 372; see O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”). Moreover, the Court is not persuaded that these terms have plain and ordinary meanings which would be apparent to the laypeople who will act as finders of fact in this dispute. DePuy’s proposal is consistent with the intrinsic record, MedIdea agrees it accurately defines at least one of the terms, and no alternative definitions have been offered as to any of the terms. As such, the Court construes “cam action surface,” “point of cam action,” and “cam action point” each to mean “the surface of a cam that contacts the tibial post.”

C. Cam Mechanism; A Member of the Distal Femoral Component Bridging the Intercondylar Region

Both asserted claims in the ’280 patent describe a structure called a “cam mechanism.” Doc. No. 92-5 at 15. Claim 6 in the ’132 patent refers to “a member on the distal femoral component bridging the intercondylar region” (hereinafter, “the ‘member’ term”).<sup>5</sup> Doc. No. 92-3 at 10. The parties agree that these two terms are subject to the same construction, though they disagree on what that construction should be. Doc. No. 92-1 at 1. Viewing these terms as synonymous with “cam,” MedIdea proposes: “a structure configured to make sliding or rolling contact with the tibial post as the knee bends.” Id. DePuy counter-proposes: “a structure *including two or more cams* that makes sliding or rolling contact with the tibial post as the knee bends.” Id. (emphasis added). As the italicized language in DePuy’s version demonstrates, the

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<sup>5</sup> Both terms also appear elsewhere in the patents-in-suit, including in the ’730 patent. The Court has reviewed and considered all uses of these terms (and all other disputed terms), both within and beyond the asserted claims, in assessing their meaning.

parties' disagreement centers on whether these terms encompass single-cam structures or require more than one cam.

The Court construes “cam mechanism” and the “member” term to mean “a structure including two or more cams.” In adopting this construction, the Court has modified DePuy’s proposal to account for the fact that cams, by definition, “make[] sliding or rolling contact with the tibial post as the knee bends.” It is unnecessary to repeat that phrase in defining “cam mechanism” and the “member” term, as it is implicitly incorporated by the word “cam.”

The construction adopted by the Court is supported by the intrinsic evidence. The common specification criticizes single-cam structures and repeatedly references multiple cams and/or multiple points of cam action. E.g., Doc. No. 92-2 at 6 (describing prior art with single cams of “complex . . . geometry” as presenting “a variety of problems as well as significantly constrained motion,” and identifying a “need” for a design “having multiple distinct cams”); see SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343 (Fed. Cir. 2001) (concluding that language in specification discussing disadvantages of prior art supported finding that claim language “should not be read so broadly as to encompass the distinguished prior art structure”). In addition, the language of the relevant claims consistently pairs these terms with references to at least two separate cams or cam action surfaces. E.g., Doc. No. 92-3 at 10 (describing the “member” term in claims 6 and 11 as including “a first . . . cam surface,” a “cam extension” with a second such surface, and an area “that does not make contact with the tibial post” separating the two cam surfaces). Although the extrinsic evidence cited by DePuy—Dr. Masini’s own documentation of his invention and his testimony that it required multiple cams—also supports this conclusion, the Court finds the limitation expressed in its construction is created by the claim language itself.

D. Separate Cam Action Surface/Area

The phrase “separate cam action surface (or area)” appears in claim 1 of the ’730 patent, as well as various other claims in the same patent which MedIdea no longer cites in support of its infringement assertions in this case. Doc. No. 92-4 at 10-11. Because the Court already has construed “cam action surface” to mean “the surface of a cam that contacts the post,” see § III(B), supra, the dispute as to this term comes down to the meaning of the word “separate.” According to MedIdea, “separate” means “distinct.” See Doc. No. 92-1 at 1 (proposing “a cam action surface that is *distinct* from a first cam action surface” (emphasis added)). Calling this proposal vague, DePuy suggests a more apt definition of “separate” in this context is “spaced apart.” See id. (proposing “the cam action surface [of the cam extension] is *spaced apart* from the cam action surface [of the first cam]” (brackets in original, emphasis added)).

The Court adopts DePuy’s proposed construction, insofar it concludes that “separate” means “spaced apart” for purposes of the patents-in-suit. Substituting “distinct” for “separate,” as MedIdea urges, would do little to aid the finder of fact in applying this term. In fact, it arguably injects ambiguity into an otherwise clear and commonly understood word.<sup>6</sup> In the

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<sup>6</sup> Perhaps realizing this, MedIdea’s counsel advanced a different definition of “separate” throughout the claim construction hearing, repeatedly describing a “cam action surface” as something which “occupies a unique location in the geometry of the surface of the cam.” The Court rejects this alternative construction. First, the “unique location” phrase appears nowhere in any of the patents-in-suit. Second, the phrase appears in neither of MedIdea’s written claim construction submissions, and MedIdea has not clearly proposed it as an alternative or replacement for the construction presented in its briefs. Espousing a new construction of a disputed term for the first time during a claim construction hearing is neither appropriate nor fair. Third, the “unique location” phrase is rife with imprecision and would needlessly require jurors to parse ambiguous and confusing concepts like “the geometry of the surface of the cam,” all in the context of a simple word (“separate”) with an otherwise plain meaning. Finally, the phrase appears to be a transparent effort by MedIdea to extend the patent language beyond its intended scope by allowing a single, irregularly shaped cam to be arbitrarily subdivided into “separate” cam action surfaces, without meaningfully limiting the potentially infinite “unique locations” one might identify on “the geometry” of any “surface.”

Court’s view, “separate” is a word with an “ordinary meaning” that is “readily apparent even to lay judges,” allowing for construction of this term via “application of the widely accepted meaning” of the word. Phillips, 415 F.3d at 1314. The Court’s construction is consistent with both the intrinsic evidence, e.g., Doc. No. 92-2 at 7 (describing figure 2D as illustrating “interconnected cams with *physically separate* contact points” (emphasis added)), and extrinsic evidence such as dictionary definitions for “separate,” see Doc. Nos. 93-20, 93-21, 93-22 (reflecting entries defining the adjective “separate” as one or more of “set or kept apart,” “disconnected,” or “detached”). MedIdea has offered no expert opinion or other evidence suggesting that a person of skill in the art would understand the word “separate,” as used in this context, in some other manner which “is not readily apparent.” Phillips, 415 F.3d at 1314. As such, the plain and ordinary meaning controls and will apply anywhere the word “separate” appears throughout the patents-in-suit.

The Court construes the entire disputed term—“separate cam action surface (or area)”—to mean “a cam action surface (or area) that is spaced apart from another cam action surface (or area).” In adopting this construction, the Court has modified DePuy’s proposal to eliminate bracketed language which appears elsewhere in the relevant claim and need not be included in the definition of this term.

E. Cam Extension; Cam Extension Providing/with a Separate/Second Cam Action Surface

Several claims in the ’132 and ’730 patents refer to a “cam extension” and/or a “cam extension providing (or with) a second (or separate) cam action surface.” Doc. No. 92-3 at 10; Doc. No. 92-4 at 10. Once again, the parties agree these terms should be assigned the same meaning. Doc. No. 92-1 at 1. The parties further agree that these terms were explicitly defined by MedIdea during prosecution of the ’132 patent, and that the Court should construe the terms

in line with the definition applied at that time.<sup>7</sup> However, the parties have differing views of how that definition should be worded here. MedIdea suggests: “a structure extending from a cam action surface that includes a separate cam action surface.” Id. DePuy offers: “bridging material and cam that extend from a first cam, with the bridging material not contacting the post.” Id. The major difference in these competing proposals is whether the term requires that a portion of the relevant structure not contact the tibial post.

After the patent examiner reviewing MedIdea’s application for what became the ’132 patent expressed uncertainty about the meaning of the term “cam extension,” Doc. No. 93-11 at 5, MedIdea explained the term by pointing to figure 2D. “Cam extension,” it said, “relates to the portion of the structure that extends from cam action point 101’ to cam action point 202’.” Doc. No. 93-13 at 9. MedIdea went on to specify that it was “claiming . . . the physical structure between” the two “cam action points.” Id.; see also Doc. No. 93-17 at 8, 12 (reflecting testimony by the inventor that “the cam extension basically represents the structure that connects” two cam surfaces, and that “bridging material” is a necessary, “structure[al]” part of a “cam extension”). In a later submission to the examiner, MedIdea characterized figure 2D as containing the same “cam surfaces that interact with the tibial post” as those in figures 2A through 2C; the “cams” in figure 2D, however, “are strengthened through the use of bridging material” connecting them to one another. Doc. No. 93-12 at 3. MedIdea identified the “cam extension” as the structure labeled 202’ in figure 2D. Id.

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<sup>7</sup> DePuy characterizes these terms as having been “coined” by MedIdea for purposes of the patents-in-suit. Doc. No. 93 at 19. MedIdea disagrees, suggesting the term has a meaning outside the context of these patents. The Court need not decide whether the term was “coined,” as the parties agree that the definition advanced during patent prosecution should control.

Having carefully considered the documents submitted by the parties reflecting MedIdea's representations when prosecuting the relevant patents, as well as the language of the patents themselves, the Court construes the "cam extension" terms to mean "the bridging material that extends from a first cam to a second, separate cam, together with the second, separate cam." In adopting this construction, the Court has endeavored to account for the various references to the terms appearing in the prosecution history. The Court perceives no meaningful difference in this context between MedIdea's reference to a "structure" and DePuy's reference to "bridging material," as MedIdea used both terms to describe part of the "cam extension" during patent prosecution. The Court opted for "bridging material" because it is more specific and descriptive, while also being consistent with the intrinsic and extrinsic record related to these terms. The word "separate" in this context has the same meaning adopted in the previous subsection.<sup>8</sup>

F. Cam Mechanism of the Femoral Component Has a . . . Convex Portion, a Concave Central Portion, and [a] . . . Convex Posterior Portion

Claim 1 in the '280 patent describes a TKR system in which the "cam mechanism of the femoral component has a superior convex portion, a concave central portion, and an inferior convex posterior portion." Doc. No. 92-5 at 15. MedIdea proposes construing this phrase to mean: "a cam mechanism that includes a central concave portion located between a first convex cam surface and a second, posterior convex cam surface," Doc. No. 92-1 at 2, or "there is a concave portion of the cam mechanism between two convex cam surfaces, one of which is posterior to the other," Doc. No. 92 at 17.<sup>9</sup> DePuy suggests: "a first convex cam surface and a

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<sup>8</sup> Although the Court has not included in its construction of these terms DePuy's limitation requiring that "the bridging material not contact[] the post," it observes that, as a matter of logic and in light of the meaning of "separate," neither a "cam extension" nor a "separate" cam could exist if the entire structure at issue were in continuous contact with the post.

<sup>9</sup> The primary position MedIdea took in its written claim construction submission was that the Court need not construe this term: "This term is self-explanatory and requires no construction." Doc. No. 92 at 17. Because lay jurors likely would understand the words "convex" and

second, posterior convex cam surface that each contact the tibial post, and that are separated by a concave portion that does not contact the tibial post.” Id. The only meaningful difference in the competing proposals amounts to whether the term’s definition should specify that the “concave central portion” may not contact the tibial post.

The Court construes this term to mean “a first convex cam surface and a second, posterior convex cam surface that are separated by a concave portion of the cam mechanism that does not contact the tibial post.” This construction is consistent with both parties’ proposals insofar as they both require that the two convex portions the term references are surfaces which contact the tibial post.<sup>10</sup> It further incorporates DePuy’s proposed language specifying that the “concave central portion” may not contact the tibial post. This is necessarily so, as continuous contact throughout both convex portions *and* the concave portion would mean that, rather than requiring two distinguishable cam surfaces (as a “cam mechanism” must), the disclosed structure could include one geometrically complex surface making continuous contact with the post (i.e., a single cam). Such an embodiment is explicitly criticized in the specification, Doc. No. 92-5 at 13, and was disavowed by Dr. Masini as outside the scope of his invention, Doc. No. 93-17 at 9. Further, no language or figure in the patent itself discloses an embodiment in which the concave

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“concave,” and because “cam mechanism” has been defined above as a structure containing two or more cams, the Court asked the parties during the Markman hearing whether this term requires further construction. Notwithstanding the position it unambiguously took in its briefs, MedIdea joined DePuy in insisting that the Court construe the term.

<sup>10</sup> Although both parties characterize MedIdea’s definition as encompassing a structure in which the first “convex portion” might not contact the tibial post, e.g., Doc. No. 93 at 22, that view ignores MedIdea’s use of the term “cam surface” to describe each of the two “convex portions” in both of its alternative proposals. By definition, a “cam surface” (whether that term means a “cam” or a “cam action surface”) would contact the tibial post. MedIdea’s urging to the contrary turns on its view, rejected by the Court above, that a “cam mechanism” need not include more than a single cam. Thus, the parties’ proposals both describe a structure with two “convex portions,” both of which must contact the tibial post—a view which is supported by the specification as well as the claim language itself.

portion of the cam mechanism makes continuous contact with the post. E.g., Doc. No. 92-5 at 1, 9-11 (containing various figures depicting cam mechanisms with concave and convex surfaces, each of which features a “concave portion” that is not contacting the post); see SciMed Life Sys., Inc., 242 F.3d at 1343 (cautioning that claim language “should not be read so broadly as to encompass [an explicitly] distinguished prior art structure”).

G. Proximal[ly]; Distal[ly]

Claim 1 of the '730 patent, like various other claims throughout the patents-in-suit, includes the terms “proximal” (or “proximally”) and “distal” (or “distally”). MedIdea argues that “proximal[ly]” means “more towards the hip than the foot when the leg is straight” or, alternatively (and “simply”), “closer to the hip”; for “distal[ly],” it proposes either “more towards the foot than the hip when the leg is straight,” or “further away from the hip.” Doc. No. 92 at 18-19. DePuy more succinctly suggests “toward the hip” and “away from the hip” for “proximal[ly]” and “distal[ly],” respectively. Doc. No. 92-1 at 2.

The Court adopts DePuy’s proposals for these terms. MedIdea’s first suggestions are gratuitously wordy, overcomplicating terms that, in the Court’s view, will not be difficult for lay jurors to comprehend. It bears noting that MedIdea at one point essentially agreed to DePuy’s proposals, Doc. No. 92-18 at 5, has offered no meaningful justification for its less concise reworking of the definitions, has explicitly proposed alternative definitions strikingly similar to DePuy’s proposals, and admitted during the Markman hearing that this dispute is not a “significant” one. DePuy’s proposals are clear, consistent with the plain and ordinary meaning of these terms to a person of ordinary skill in the art, and supported by the intrinsic record.

Accordingly, the Court construes “proximal” and “proximally” to mean “toward the hip,” and construes “distal” and “distally” to mean “away from the hip.”



H. Early After the Initiation of Flexion

Claims in the '132 and '730 patents describe a cam action point which contacts the tibial post “early after the initiation of flexion.” Doc. No. 92-3 at 10; Doc. No. 92-4 at 10. According to MedIdea, this term is “better left to expert testimony and jury determination” and, thus, should not be construed. Doc. No. 92 at 19. In the alternative, MedIdea suggests the term means “prior to 60 degrees of flexion.” *Id.* DePuy’s proposal changes only the number of degrees—from 60 to 30—that it argues should mark the boundary of “early after the initiation of flexion.” Doc. No. 92-1 at 2.

The Court adopts DePuy’s proposal.<sup>11</sup> MedIdea offers no intrinsic or extrinsic support, and no non-arbitrary basis, for its invitation to assign a 60-degree limit to this term. *See* Doc. No. 92 at 19 (asserting *without support* that the term means “before mid-flexion” and summarily urging *without support* that the Court should endorse “a logical segmentation of a 180-degree flexion arc” into thirds); Doc. No. 100-1 at 9 (listing no “supporting evidence” for MedIdea’s construction of this term). DePuy, on the other hand, grounds its proposal in the intrinsic record, noting that the common specification for the patents-in-suit criticizes prior art for including “a space between the cam and the post when the knee is in extension” large enough to permit “translation of the femur on the tibia” during early flexion of the knee before the post contacts “the posterior cam.” Doc. No. 92-2 at 6. In that prior art, the relevant contact occurs at 25 or 30 degrees of flexion. *See generally* Doc. No. 93-19 at 2, 6-12. The common specification here goes on to disclose that a feature of the invention is the use of “a second point of cam action” positioned “to minimize and, ideally, prevent anterior translation at the initiation of flexion.” *Id.*

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<sup>11</sup> As explained previously, the Court cannot leave resolution of a genuine dispute as to the meaning of a claim term to the jury to resolve with the aid of expert testimony, as MedIdea suggests. *O2 Micro Intern. Ltd.*, 521 F.3d at 1362.

On this record, the Court finds that DePuy's proposal is consistent with the language of the specification and the plain and ordinary meaning of the claim language.

As such, the Court will construe "early after the initiation of flexion" to mean "prior to 30 degrees of flexion."

I. Central Cam; Superior; Inferior

Anticipating a future indefiniteness challenge by DePuy to the term "central cam" and to other terms including the words "superior" and/or "inferior," MedIdea accuses DePuy of "gamesmanship" and suggests in its opening brief that the Court should rule now on the definiteness of the relevant terms. Doc. No. 92 at 20-26. Given the burden DePuy will bear to establish indefiniteness by clear and convincing evidence, as well as the potentially dispositive and patent-invalidating effect of an indefiniteness finding (at least as to certain claims and patents), it is appropriate to defer resolution of definiteness questions until summary judgment, when a fuller record is available.

IV. CONCLUSION

The claim terms at issue will be construed at trial and for all other purposes in this litigation in a manner consistent with the above rulings of the Court.<sup>12</sup> The Court will entertain further argument regarding indefiniteness in the context of summary judgment.

Within fourteen days of this Order, the parties shall submit a joint status report stating their mutual or respective positions regarding: 1) the need for further fact discovery in light of this Order and the deadline for conducting such discovery; 2) a schedule to govern expert discovery, including the exchange of expert reports and deadlines for conducting expert

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<sup>12</sup> The parties have agreed to constructions for four terms. See Doc. No. 92-1 at 3 (listing agreed-to definitions of "tibial articulating surface," "anterior," "posterior," and "a structure providing more than one physically separate and discontinuous points of cam action as the knee moves from extension to flexion"). The Court will accept and apply those definitions.

depositions; 3) a schedule to govern the filing and briefing of dispositive motions; 4) the expected length of a trial; and 5) any other scheduling or procedural issues the parties wish to bring to the Court's attention at this time.

SO ORDERED.

/s/ Leo T. Sorokin  
United States District Judge