

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

CAPTION HEALTH, INC.
Petitioner

v.

UNIVERSITY OF BRITISH COLUMBIA
Patent Owner

U.S. PATENT NO. 10,751,029

Inter Partes Review No.: IPR2025-01422

**PETITIONER'S OPPOSITION TO PATENT OWNER'S REQUEST FOR
DISCRETIONARY DENIAL**

TABLE OF CONTENTS

I. INTRODUCTION1

II. ARGUMENT.....2

A. No Trial Date Has Been Set by the District Court and Trial Is Unlikely to Occur Prior to Final Written Decision of the '029 Patent IPR Because Patent Owner’s Litigation Strategy Has Caused Significant Delay.2

B. Patent Owner Does Not Have “Settled Expectations” in the '029 Patent.4

C. Petitioner’s Claim Construction Positions Are Wholly Appropriate, Consistent Between Fora, and Do Not Favor Discretionary Denial.....6

D. On Balance, the *Fintiv* Discretionary Factors Demonstrate That This Case Is an Appropriate Use of Patent Office Resources.9

1. Factor 1: The Likelihood of a Stay of the District Court Litigation is High if the Board Institutes Review.....9

2. Factor 2: No Trial Date Has Been Scheduled.....10

3. Factor 3: The Parties’ Investment in the District Court Case Has Not Been Significant at This Early Phase and the District Court Has Not Issued Any Substantive Order on the Patents.10

4. Factor 4: As a Result of Petitioner’s *Sotera* Stipulation, the Litigated Issues Will Not Overlap with the IPR If Instituted.....11

5. Factor 5: Even Though Petitioner is Also a Defendant in the District Court Proceeding, There Is No Overlap.12

6. Factor 6: The Merits of the Petition Strongly Favor Institution.12

E. The *Advanced Bionics* Framework Favors Institution.....14

1. The Petition Relies on Prior Art Combinations That Were Not Addressed by the Office, Including References That Are Not Substantially the Same as the Prior Art Presented to the Office.15

2.	The Office Materially Erred by not Recognizing the Significance of Krishnan and not Locating or Considering Chen and Wu.....	16
F.	Patent Owner Identifies No Compelling Economic or Public Health Interests That Support Discretionary Denial	18
III.	CONCLUSION	19

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH</i> , IPR2019-01469, Paper 6 (Feb. 13, 2020)	14-15, 16-17
<i>Amgen, Inc. v. Bristol-Myers Squibb Co.</i> , IPR2025-00603, Paper 8 (July 24, 2025)	18-19
<i>Apple, Inc. v. Fintiv, Inc.</i> , IPR2020-00019, Paper 11 (March 20, 2020)	9-12
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG</i> , IPR2017-01586, Paper 8 (Dec. 15, 2017)	14
<i>Caption Health, Inc. v. University of British Columbia</i> , IPR2025-01066, Paper 13 (October 10, 2025)	2
<i>Ecto World, LLC v. RAI Strategic Holdings, Inc.</i> , IPR2024-01280, Paper 13 (May 19, 2025)	17
<i>Google LLC v. Withrow Networks Inc.</i> , IPR2025-00775, Paper 10 (Aug. 14, 2025)	5
<i>Howard Industries, Inc. v. CAPSA Solutions LLC</i> , IPR2023-01275, Paper 9 (Feb. 26, 2024)	15
<i>Inari Medical Inc., v. Imperative Care, Inc., et al.</i> , Case No. 24-cv- 03117-EKL, Dkt. 137(N.D. Cal. September 29, 2025)	9-10
<i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2023-01275, Paper 9 (Feb. 26, 2024)	10
<i>Microsoft Corp. v. Edge Networking Sys., LLC</i> , IPR2025-00617, -618, -619, Paper 12 (July 31, 2025)	5
<i>Oticon Medical AB v. Cochlear Limited</i> , IPR2019-00975, Paper 15 (Oct. 16, 2019)	16, 18
<i>Pharmaceuticals Industries Inc. v. Nivagen Pharmaceuticals, Inc.</i> IPR2025-00893, Paper 18, pp.2-3 (September 19, 2025)	8

<i>Shenzen Tuozhu Tech. Co. v. Stratasy, Inc.</i> , IPR2025-00438, -531, -532, -585, -611, Paper 10 (July 17, 2025).....	5
<i>Snap, Inc. v. SRK Tech. LLC</i> , IPR2020-00820, Paper 15 (Oct. 21, 2020)	12
<i>Teleflex, Inc. v. Ficosa N. Am. Corp.</i> , 299 F.3d 1313 (Fed. Cir. 2002)	14
<i>Verizon Connect Inc. v. Omega Patents, LLC</i> , IPR2023-01162, Paper 12 (Feb. 21, 2024).....	16
Statutes	
35 U.S.C. §325(d)	14-17
Other Authorities	
Interim Process FAQs #25	16-17
“Guidance on USPTO's rescission of ‘Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation,” Scott R. Boalick, Chief Administrative Patent Judge. (March 24, 2025).	11
<i>Patent Trial and Appeal Board Consolidated Trial Practice Guide</i>	6-7
U.S Patent No. 10,751,029.....	1-7, 10, 12-13, 15, 18
U.S. Patent No. 11,129,591.....	1, 2, 4, 6, 7

EXHIBIT LIST

No.	Description
Ex1001	U.S. Patent No. 10,751,029 (“the Patent”)
Ex1002	Declaration of Dr. Rahul Deo
Ex1003	Dr. Deo Curriculum Vitae
Ex1004	Prosecution History File of the Patent (Application No. 16/557,261)
Ex1005	U.S. Patent Application Publication No. 2005/0251013 (“Krishnan”)
Ex1006	U.S. Patent Application Publication No. 2019/0076127 (“Aase”)
Ex1007	U.S. Patent No. 10,013,640 (“Angelova”)
Ex1008	International Patent Application Publication No. WO2016/189313 (“Paterson”)
Ex1009	Chen, “Automatic Fetal Ultrasound Standard Plane Detection Using Knowledge Transferred Recurrent Neural Networks,” <i>Medical Image Computing and Computer-Assisted Intervention – MICCAI 2015</i> : 507-514 (November 18, 2015), https://doi.org/10.1007/978-3-319-24553-9_62 (“Chen”)
Ex1010	Wu, “FUIQA: Fetal Ultrasound Image Quality Assessment With Deep Convolutional Networks,” <i>IEEE Transactions on Cybernetics</i> , 47(5):1336-1349 (May 2017), doi: 10.1109/TCYB.2017.2671898 (“Wu”)
Ex1011	First Amended Complaint, <i>University of British Columbia v. Caption Health, Inc.</i> , Case No. 5:24-cv-03200-EKL, Dkt. 46, Dec. 20, 2024.
Ex1012	Itchhaporia, “Artificial Neural Networks: Current Status in Cardiovascular Medicine,” <i>JACC</i> 28(2): 515-521 (August 1996) (“Itchhaporia”)
Ex1013	Chen, “Iterative Multi-domain Regularized Deep Learning for Anatomical Structure Detection and Segmentation from Ultrasound Images,” <i>Medical Image Computing and Computer-Assisted Intervention–MICCAI 2016</i> : 487-495 (October 2, 2016)
Ex1014	Kong, “Recognizing End-Diastole and End-Systole Frames via Deep Temporal Regression Network,” <i>Medical Image Computing and Computer-Assisted Intervention—MICCAI 2016</i> : 264-272 (2016), DOI:10.1007/978-3-319-46726-9_31

No.	Description
Ex1015	Joint Claim Construction and Prehearing Statement, <i>University of British Columbia v. Caption Health, Inc.</i> , Case No. 5:24-cv-03200-EKL, Dkt. 68, May 30, 2025.
Ex1016	Chen, “Standard plane localization in fetal ultrasound via domain transferred deep neural networks,” <i>IEEE Journal of Biomedical and Health Informatics</i> , 19(5): 1627-1636 (September 2015), DOI:10.1109/JBHI.2015.2425041 (“Chen I”)
Ex1017	Miller et al., “Review of neural network applications in medical imaging and signal processing,” <i>Medical & Biological Engineering & Computing</i> (30):449-464 (September 1992) (“Miller”)
Ex1018	U.S. Patent Application Publication No. 2017/0262982 (“Pagoulatos”)
Ex1019	Reserved
Ex1020	González et al., “Echocardiogram Image Recognition Using Neural Networks in Recent Advances on Hybrid Approaches for Designing Intelligent Systems,” <i>Studies in Computational Intelligence</i> 547:427-435 (March 2014) (“González”)
Ex1021	Donahue et al., “Long-term Recurrent Convolutional Networks for Visual Recognition and Description,” arXiv:1411.4389v1 [cs.CV] (November 2014) (“Donahue”)
Ex1022	Caruana, “Multitask Learning: A Knowledge-Based Source of Inductive Bias,” <i>Proceedings of the 10th International Conference on Machine Learning, ML-93, University of Massachusetts, Amherst, 1993</i> , pp. 41-48.
Ex1023	U.S. Patent No. 5,906,578 (“Rajan”)
Ex1024	U.S. Patent Application Publication No. 2009/0074280 (“Lu”)
Ex1025	U.S. Patent Application Publication No. 2007/0055153 (“Simopoulos”)
Ex1026	Salomon LJ et al. A score-based method for quality control of fetal images at routine second-trimester ultrasound examination. <i>Prenat Diagn.</i> 2008 Sep;28(9):822-7. doi: 10.1002/pd.2016. PMID: 18646244
Ex1027	LeCun et al., “Handwritten Digit Recognition with a Back-Propagation Network,” <i>Neural Computation</i> . 1 (4): 541–551. doi:10.1162/neco.1989.1.4.541. ISSN 0899-7667. S2CID 41312633 (“LeCun”)

No.	Description
Ex1028	A. Bouzerdoum, et al., "Image quality assessment using a neural network approach," Proceedings of the Fourth IEEE International Symposium on Signal Processing and Information Technology, 2004., Rome, Italy, 2004, pp. 330-333, doi: 10.1109/ISSPIT.2004.1433751 ("Bouzerdoum")
Ex1029	A. Krizhevsky, et al., "ImageNet classification with deep convolutional neural networks," Communications of the ACM, Volume 60, Issue 6, pp. 84-90 doi: 10.1145/3065386 (June 2017) ("Krizhevsky")
Ex1030	Declaration of Marla R. Butler in Support of Motion for Admission <i>Pro Hac Vice</i>
Ex1031	Declaration of William E. Manske in Support of Motion for Admission <i>Pro Hac Vice</i>
Ex1032	Complaint, University of British Columbia v. Caption Health, Inc., GE Healthcare Technologies Inc. Case No. 3:24-cv-3200-PBS, Dkt. 1, May 28, 2024
Ex1033	Order Granting Plaintiff's Motion for leave to Amend Infringement Contentions, Dkt. 74, July 2, 2025
Ex1034	Case Management & Scheduling Order, ECF No. 39, Oct. 11, 2024
Ex1035	Scheduling Order, ECF No. 82, Aug. 13, 2025
Ex1036	Order Denying Motion to Stay, <i>University of British Columbia v. Caption Health, Inc.</i> , Case No. 5:24-cv-03200-EKL, Dkt. 80, Aug. 6, 2025
Ex1037	Caption Health, Inc. v. University of British Columbia, IPR2025-01066, Paper 13 (October 10, 2025)
Ex1038	UBC's First Supplemental Objections and Response to Defendant's First Set of Interrogatories (Nos. 1-3), March 7, 2025
Ex1039	Ex. C to Joint Amended and Supplemented Claim Construction and Prehearing Statement, Univ. of British Columbia v. Caption Health, Inc., No. 24-cv-03200 (N.D. Cal. Oct. 10, 2025), ECF No. 87-3
Ex1040	Reserved
Ex1041	Reserved
Ex1042	Lorentzon, M. "Feature Extraction for Image Selection Using Machine Learning," Department of Electrical Engineering, Linköping University, 2017, pp.1-45

No.	Description
Ex1043	Kumar, G. et al. "A Detailed Review of Feature Extraction in Image Processing Systems" 2014 Fourth International Conference on Advanced Computing and Computational Technologies, pp.5-12.

I. INTRODUCTION

Petitioner, Caption Health, Inc., is a U.S. entity that independently developed, and patented, a commercial software product that actively assists during the acquisition of ultrasound images by providing real-time guidance and feedback to the ultrasound operator. The genesis of Petitioner’s product is found in US2005/0251013 (published November 2005) to co-inventor Mike Cannon of Caption Health (Ex1005)—i.e., the very same published patent application that is the foundation of Petitioner’s invalidity grounds (hereinafter “Krishnan” as referred to in the Petition).

Patent Owner, the University of British Columbia, is a Canadian entity whose patent (“the ’029 patent”) issued in August 2020. No evidence has been presented that the patent has ever been commercialized in a product, licensed, or “pressure tested” in any forum.

This is not a scenario that calls for the Director to step in to protect the settled expectations of a patent owner. Patent Owner has no settled expectations. Discretionarily denying review would not strengthen the patent system, encourage innovation, or advance the interests of the American public.

The Director should deny Patent Owner’s request for discretionary denial for the same reasons that Deputy Director Stewart already denied Patent Owner’s request for discretionary denial of a related petition challenging Patent Owner’s U.S.

Patent No. 11,129,591 (the “’591 patent”) in IPR2025-01066. *See* Ex1037 (*Caption Health, Inc. v. University of British Columbia*, IPR2025-01066, Paper 13 (October 10, 2025)). The ’029 patent and the ’591 patent are directed to similar subject matter and are both asserted in the same N.D. Cal. litigation against the same accused products. Efficiency would be best served if both patents are reviewed by IPR in parallel. Although Patent Owner attempts to gin up several distinctions between the present IPR and the ’591 patent IPR, those purported distinctions do not hold water. The patents issued about a year apart—both less than six years ago—and are asserted in the same litigation for which no trial date has yet been set and in which the District Court has already signaled willingness to reconsider a stay if institution is granted. The relevant material circumstances are identical and should produce the same result, i.e., no discretionary denial.

II. ARGUMENT

A. No Trial Date Has Been Set by the District Court and Trial Is Unlikely to Occur Prior to Final Written Decision of the ’029 Patent IPR Because Patent Owner’s Litigation Strategy Has Caused Significant Delay.

Deputy Director Stewart—then Acting Director Stewart—recently acknowledged that “[t]here is no trial date scheduled in the co-pending district court litigation.” *Id.*, p.2. Therefore, Patent Owner’s claim that the District Court trial in N.D. Cal. will occur prior to a final written decision (“FWD”) is pure speculation. Deputy Director Stewart did not find—as Patent Owner claims (DD Req. at 2)—that

the median time-to-trial for patent litigation cases in N.D. Cal. “supports” a District Court trial date in December 2026 or January 2027. Ex1037, p.2. To the contrary, she merely reported, in her decision rejecting discretionary denial, Patent Owner’s allegation, which Petitioner contested as incorrect. Accordingly, Patent Owner’s present request does not present **any** evidentiary support for the naked claim that the District Court trial would occur before a FWD.

Regardless, even if Patent Owner had offered evidence of the median time-to-trial, that statistic would have no practical application here because it is completely untethered to the reality of this case. Patent Owner amended its Complaint to add the ’029 patent almost seven months after the case began. *See*, Ex1032 (May 24, 2024, Complaint) and Ex1011 (December 20, 2024, First Amended Complaint). Then, Patent Owner was granted leave to add entirely new accused products approximately 13 months after the District Court litigation case began. *See* Ex1033, p.6 (July 2, 2025, Order Granting Plaintiff’s Motion for leave to Amend Infringement Contentions, Dkt. 74). Notably, the Court’s justification for granting leave was that: “[T]he action is in the early stages of litigation. No depositions have been taken, and there has been no claim construction. The District Court has also not set a date for the close of fact discovery or expert discovery.” *Id.*

These changes have drastically altered the scope of the case, which required the District Court to completely reset the case schedule. *See*, Ex1035. For example,

the claim construction hearing, which was originally set for May 6, 2025, has been delayed almost 10 months until to March 5, 2026.¹ *Compare* Ex1034 at 3 *and* Ex1035 at 3. Thus, Patent Owner’s strategic decision to add a new patent and entirely new accused products effectively reset the case. Therefore, even if the median time-to-trial for patent infringement cases in N.D. Cal. was of record here—which it is not—the predicted trial date should not be calculated from the date of the original Complaint. Instead, a more appropriate calculation would use the date on which this case was materially expanded in July 2025. And under that calculation, there is no realistic scenario where the District Court litigation would conclude before a FWD.

B. Patent Owner Does Not Have “Settled Expectations” in the ’029 Patent.

Deputy Director Stewart previously found that Patent Owner’s ’591 patent “has not been in force for a significant period of time (issued in 2021), and, accordingly, Patent Owner has not developed strong settled expectations that favor discretionary denial.” Ex1037, p.2. Nevertheless, Patent Owner argues here that it has strong settled expectations in the ’029 patent since that patent issued about a year earlier than the ’591 patent in August 2020. DD Req. at 3-4. Patent Owner cites to

¹ The Court’s deadlines for its Claim Construction Tutorial and Claim Construction Hearing, as set forth in Ex1035, contain typographical errors. Both should refer to 2026 instead of 2025.

no supporting authority, likely because the Director has repeatedly found that five years is not a substantial enough amount of time for Patent Owner to have settled expectations with respect to the validity or enforceability of its patent. *Google LLC v. Withrow Networks Inc.*, IPR2025-00775, Paper 10 at 2 (Aug. 14, 2025) (determining that “the challenged patent [issued in 2020] has not been in force for a significant period of time” in order to enjoy strong settled expectations); *Microsoft Corp. v. Edge Networking Sys., LLC*, IPR2025-00617, -618, -619, Paper 12 at 2 (July 31, 2025) (finding that “the challenged patents have not been in force for a significant period of time (issued in 2021, 2023, and 2020, respectively” such that “Patent Owner has not developed strong settled expectations.”)

Further, Patent Owner does not practice the '029 patent. See Ex1038 at 2-3 (“Plaintiff has never had a Practicing Product...”). Thus, even if the patent had been in force for longer, Patent Owner would have no settled expectations as against Petitioner. *Shenzhen Tuozhu Tech. Co. v. Stratasys, Inc.*, IPR2025-00438, -531, -532, -585, -611, Paper 10 at 3 (July 17, 2025) (finding no “settled expectations” on patent in force for “approximately 10 years” where, as here, the challenged patent has not been commercialized or otherwise applied).

Finally, Patent Owner’s argument that it has pre-issuance “settled expectations” merely because patent applications owned by one of GE Healthcare’s subsidiaries cited to the '029 patent *application* is nonsensical. DD Req. at 4. The

Director's "settled expectations" analysis, to date, *always* looks to the time that the patent has been in force, i.e., after issuance up to the time the patent is challenged. This makes sense, since prior to issuing, a patent application is not an enforceable property right. Patent Owner cites no authority to the contrary (or at all) and yet appears to argue that GE HealthCare was supposed to operate with the understanding that a yet-to-be issued patent might someday be asserted against a not-yet-developed product offered by a company it had yet to acquire. At bottom, Patent Owner does not have "settled expectations" in the '029 patent any more than it does the '591 patent which weighs against granting discretionary denial.

C. Petitioner's Claim Construction Positions Are Wholly Appropriate, Consistent Between Fora, and Do Not Favor Discretionary Denial.

Patent Owner urges discretionary denial on two grounds relating to Petitioner's claim constructions or lack thereof. DD Req. at 4-5.

First, Patent Owner argues that the Petition is deficient because it does not contain express claim constructions (except for terms drafted in means-plus-function format). Patent Owner's argument has no merit. The *Patent Trial and Appeal Board Consolidated Trial Practice Guide* explains that "[i]f a petitioner believes that a claim term requires an express construction, the petitioner must include a statement identifying a proposed construction of the particular term and where the intrinsic and/or extrinsic evidence supports that meaning." CTPG, pp.44 (emphasis added).

“On the other hand, a petitioner may include a statement that the claim terms require no express construction” (*id.*) as Petitioner properly did in the ’029 patent IPR. *See* Petition at 10 (“Except for terms drafted in means-plus-function format, the claim terms of the Patent do not require an express construction. The prior art addressed herein discloses the claimed features under any reasonable interpretation of the claim language.”). Patent Owner’s suggestion that Petitioner must construe the challenged claims is plainly wrong.

Second, Patent Owner alleges that Petitioner has taken inconsistent claim construction positions in the Petition and the District Court litigation with respect to the term “quality assessment value.” DD Req. at 5. That is incorrect. Petitioner’s position is that: (1) the term should be given its plain and ordinary meaning and (2) the construction that Petitioner offered in the District Court is an express statement of the plain and ordinary meaning. The Petitioner has not offered two different constructions in which a difference in scope can even be identified.

The reason why Petitioner was forced to explicitly “spell out” the plain and ordinary meaning in the District Court—rather than simply agree that no construction is required—is because the Parties apparently disagree over the plain and ordinary meaning. It is apparent from Patent Owner’s allegation of infringement that Patent Owner is stretching the meaning of the claim language beyond its plain and ordinary meaning. Therefore, Petitioner put the plain and ordinary meaning into

words to crystallize the dispute over infringement.

By contrast, the Petition did not need to provide an express statement of the plain and ordinary meaning because the language used in the asserted prior art references mirrors the language of the claim. For example, Krishnan describes determining a “quality assessment” that is a “quality score (within a predefined range) that provides an indication [of] a diagnostic quality level of the medical images.” Ex1005, [0036]. No construction is required because the prior art reference repeats the claim language.

Regardless, Patent Owner’s attempt to manufacture a dispute here does not justify discretionary denial because Krishnan, as quoted above, also satisfies the express construction that Petitioner provided in the District Court litigation (i.e. “score of diagnostic image quality”, Ex1039, pp.1-2). Petitioner is happy to adopt here the exact same wording used in the District Court litigation, but Petitioner did not wish to burden the Board with unnecessary claim construction. Ultimately, Petitioner has not taken “different” or “narrower” positions between the two proceedings, making *Sun Pharmaceuticals Industries Inc. v. Nivagen Pharmaceuticals, Inc.* inapposite here. IPR2025-00893, Paper 18 at 2-3 (September 19, 2025).

D. On Balance, the *Fintiv* Discretionary Factors Demonstrate That This Case Is an Appropriate Use of Patent Office Resources.

1. Factor 1: The Likelihood of a Stay of the District Court Litigation is High if the Board Institutes Review.

Fintiv states that where a “district court has denied a motion for stay without prejudice and indicated to the parties that it will consider a renewed motion or reconsider a motion to stay if a PTAB trial is instituted ... [t]his fact has usually weighed against exercising authority to deny institution....” *Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 6-7 (March 20, 2020). That is precisely the case here. The District Court denied Petitioner’s pre-institution motion *without prejudice* to renew, and intimated that a stay is more likely upon institution. Ex1036. After acknowledging at least three potential benefits that could be achieved by a stay, the District Court ultimately decided that “the potential for simplification weighs against a stay *at this time*” because “the Court cannot assume that any of these benefits will manifest here *because the PTAB has not yet instituted IPR.*” *Id.*, pp.2-3 (emphasis added). The District Court also foreshadowed that “this balance may shift if the PTAB decides to proceed to a trial on *one or both* of the asserted Patents.” *Id.*, p.4 (emphasis added); *see also, Inari Medical Inc., v. Imperative Care, Inc.*, et al., Case No. 24-cv-03117-EKL, Dkt. 137 (September 29, 2025) (Judge Lee recently granting a motion for stay pending

IPR where IPR had only been instituted for some of the patents in suit).

If institution is granted for either the '591 (in December 2025) or the '029 patent (in February 2026), Petitioner will renew its motion for stay. Because the District Court litigation would still be at a relatively early stage, with no substantive ruling, or even a hearing, on claim construction, the overall balance of relevant factors would strongly support a stay—as already hinted at by the District Court. Thus, *Fintiv* Factor 1 weighs against discretionary denial. *See, e.g., Imperative Care, Inc. v. Inari Medical, Inc.*, IPR2025-00289, Paper 9 at 2 (denying discretionary denial in part because evidence existed that “the district court is likely to grant a stay if this proceeding is instituted[.]”)

2. Factor 2: No Trial Date Has Been Scheduled.

As already set forth in Section II.A. above, this factor weighs in favor of institution because no trial date has been set and there is no basis to conclude that a District Court trial would occur before the FWD.

3. Factor 3: The Parties’ Investment in the District Court Case Has Not Been Significant at This Early Phase and the District Court Has Not Issued Any Substantive Order on the Patents.

This factor favors institution because the degree of investment by the parties and the District Court in the parallel litigation has not been significant and the District Court has issued no “substantive orders related to the patent at issue in the petition.” *Fintiv*, IPR2020-00019, Paper 11, at 9-10. Indeed, the District Court

clearly stated: “this case is at a relatively early stage[;]” “the parties have not engaged in costly expert discovery or dispositive motion practice[;]” “[t]he Court has not issued a claim construction order[;]” and, “substantial work still remains for this case to be ready for trial.” Ex1036, p.2 (internal quotations omitted).

While Patent Owner claims to have invested substantial resources in the District Court case, the parties have yet to take a single deposition or exchange any expert reports. And, even though claim construction briefing is now underway, the claim construction hearing will not take place until March 5, 2026, at the earliest, if the case is not stayed first. Ex1035, p.3.

4. Factor 4: As a Result of Petitioner’s *Sotera* Stipulation, the Litigated Issues Will Not Overlap with the IPR If Instituted

“A timely-filed *Sotera* stipulation...is highly relevant...as part of [the] holistic analysis under *Fintiv*.” See “Guidance on USPTO’s recission of ‘Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation,” Scott R. Boalick, Chief Administrative Patent Judge. (March 24, 2025). Here, even if the District Court does not stay the litigation, Petitioner submitted a binding *Sotera* stipulation agreeing to forgo overlapping prior art challenges at the District Court if the PTAB institutes IPR. Additionally, Petitioner’s invalidity contentions in the District Court litigation include only published prior art, not so-called system prior art. See Ex2011. Therefore, the potential for overlapping invalidity challenges has been eliminated.

Patent Owner’s complaint that some overlap might exist “at least during the gap” between institution of the ’591 and ’029 IPRs—i.e., between December 2025 and February 2026—is not only immaterial, it is also unlikely given the strong likelihood that the District Court will revisit Petitioner’s request for a stay. *See, supra* II.D.1.

5. Factor 5: Even Though Petitioner is Also a Defendant in the District Court Proceeding, There Is No Overlap.

If “the parallel District Court proceeding is stayed, and there is not substantial overlap between the invalidity contentions and the Petition challenges,” the Board may regard *Fintiv* Factor 5 as “neutral.” *Snap, Inc. v. SRK Tech. LLC*, IPR2020-00820, Paper 15 at 16 (Oct. 21, 2020). Here, the District Court litigation has a high probability of being stayed with respect to the challenged patents. *See, supra* Section II.D.1. The timing of such a stay combined with Petitioner’s Amended *Sotera* stipulation (*see, supra* II.D.4) ensures that there is no overlap between the litigation and the IPR. Therefore, this factor should be regarded as neutral.

6. Factor 6: The Merits of the Petition Strongly Favor Institution.

Even if the first five factors favored discretionary denial—which they do not—Petitioner’s challenge presents a compelling case on the merits that justifies institution. Due to the page constraints of this Opposition, Petitioner encourages the Director to review representative claim 1 in the Petition and appreciate just how

straightforward the anticipation by Krishnan (Ex1005) really is. No prior art combinations, no inherency, and no claim constructions are required because Krishnan plainly and expressly discloses every limitation of claim 1.

To put the strength of Petitioner’s challenge into perspective, consider that Patent Owner’s **only** argument against anticipation of claim 1 is based on Patent Owner’s blatant attempt to read a new limitation into the claim through a newly offered claim construction that Petitioner has had no opportunity to address. *See* DD Req. at 14-16. Patent Owner’s strategy is transparent.

Method claim 1 recites the step of deriving one or more “extracted feature representations” from ultrasound images. Krishnan states, almost identically, that its “feature analysis module (102) implements methods for automatically extracting one or more types of features/parameters from input medical image data and combining the extracted features/parameters in a manner that is suitable for processing.” Ex1005 at [0017].

Patent Owner attempts to save the ‘029 patent by injecting a claim construction where none is required. DD Req. at 14-15. After reviewing the Petition and the Krishnan reference, Patent Owner argues that an “extracted feature representation” can *only* be obtained by a neural network—even though the independent claims in which the term appears, including claim 1, do not refer to or require a neural network. This is the epitome of improperly reading in a new claim

limitation—i.e., the “cardinal sin of claim construction.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002).

A review of the relevant literature reveals a myriad of known techniques for extracting features from images—most of which do not involve neural networks. *See, e.g.*, Ex1042, pp.18-19, Ex1043, pp.5-6, 8. Thus, the plain and ordinary meaning of the claim language is not restricted to just the use of a neural network as Patent Owner contends. Furthermore, discretionary denial should not be granted under these circumstances, i.e., before Petitioner has even had an opportunity to fully address Patent Owner’s improper claim construction.

E. The *Advanced Bionics* Framework Favors Institution

Using the two-part *Advanced Bionics*² framework and the factors delineated in *Becton, Dickinson*³, institution should not be denied under 35 U.S.C. §325(d). The first inquiry is “whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office.” *Advanced Bionics*, Paper 6, at 8. The second inquiry is “whether the petitioner has demonstrated that the Office erred in

² *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (Feb. 13, 2020) (precedential).

³ *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17-18 (Dec. 15, 2017) (precedential as to Section III.C.5, first paragraph).

a manner material to the patentability of challenged claims.” *Id.* If the Director finds that “the same or substantially the same art or arguments were not presented to the Office during prosecution[,]” then proceeding to the second inquiry is unnecessary, and discretionary denial under §325(d) should be declined. *See, e.g., Howard Industries, Inc. v. CAPSA Solutions LLC*, IPR2023-01275, Paper 9 at 45 (Feb. 26, 2024). That is precisely the case here.

1. The Petition Relies on Prior Art Combinations That Were Not Addressed by the Office, Including References That Are Not Substantially the Same as the Prior Art Presented to the Office.

The Petition challenges 23 of the 30 claims of the '029 patent based on the *combination* of Krishnan (Ex1005) with one or more of Chen (Ex1009), Wu (Ex1010), and Aase (Ex1006). *See* Petition, p.9. Patent Owner admits that Chen and Wu were never presented to, or considered by, the Patent Office. (DD Req. at 12). Neither was Aase (Ex1004), which Patent Owner completely fails to address.

Patent Owner contends that Chen and Wu are merely cumulative of other references, Rothberg (Ex2032) and Park (Ex2033), that were disclosed to the Examiner in an IDS. *Id.* at 12-13. Patent Owner’s explanation, however, is reductive and incorrect. Patent Owner oversimplifies the Petition’s reliance on Chen and Wu to nothing more than generally teaching the training of view category assessment and quality assessment neural networks. DD Req. at 11-12. In reality, the Petition relies on the specific training algorithms and neural network architecture taught by

Chen and Wu (*e.g.*, Petition, pp.17-20,51-62, 71-72,75-77), especially as they relate to many of the dependent claims of the patent. Patent Owner’s shallow analysis ignores these details of Chen and Wu and, therefore, fails to show that they are cumulative of prior art cited during prosecution.

Accordingly, even if Krishnan was considered by the Patent Office, the combinations of Krishnan-Chen, Krishnan-Aase, and Krishnan-Chen-Wu present “different prior art than the Office was aware of.” *See Oticon Medical AB v. Cockslear Limited*, IPR2019-00975, Paper 15 at 20 (Oct. 16, 2019)) (precedential as to §§ II.B and II.C); *Verizon Connect Inc. v. Omega Patents, LLC*, IPR2023-01162, Paper 12 at 14 (Feb. 21, 2024) (“[A]lthough we agree that Flick ’885 was previously presented to the Office, we determine that the combination of Flick ’885 and Flick ’561 was not previously presented. Consequently, we determine that the same or substantially the same prior art or arguments were not previously presented to the Office, and we decline to exercise our discretion under §325(d) to deny institution of trial.”). Because the first *Advanced Bionics* inquiry is not satisfied, discretionary denial under §325(d) should be declined.

2. The Office Materially Erred by not Recognizing the Significance of Krishnan and not Locating or Considering Chen and Wu.

As a preliminary matter, Patent Owner argues that it was “incumbent on Petitioner to address §325(d)” in its Petition and that Petitioner should be precluded

from doing so now. DD Req. at 13-14. Patent Owner is plainly wrong in the new era of bifurcated briefing. The Office has unambiguously directed that: “The petition should not address discretionary issues. A petitioner should raise any discretionary issues in its opposition to a patent owner’s discretionary denial brief, including issues relating to 35 U.S.C. § 325(d), parallel proceedings, parallel petitions, serial petitions, and any other matter bearing on the Director’s discretion to institute.” *See* Interim Process FAQs #25 (emphasis added) (“Should a petitioner address discretionary issued in its petition? No.”).

Moving on to the merits, the Board has stated that, *even if* a prior art reference was presented to the Examiner in an IDS—such as Krishnan—“a petitioner may argue that it satisfies the second part of *Advanced Bionics* because the asserted prior art was not a basis for rejection during examination, is not substantially the same as prior art the Examiner applied, and includes specific teachings that impact patentability of the challenged claims.” *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5 (May 19, 2025) (precedential as to §A) (internal quotations omitted). That is precisely what Petitioner has done here.

Krishnan was not used as a basis for rejection during examination; nor does Patent Owner allege that it was. Krishnan is not substantially the same as any prior art the Examiner substantively addressed during prosecution; nor does Patent Owner allege that it is. And, as addressed in Section II.D.6 above, Krishnan expressly

discloses every element of at least claim 1 of the '029 patent—despite Patent Owner's attempt to insert new limitations through claim construction. Thus, the Examiner materially erred by not recognizing and applying the most pertinent prior art. *See Oticon Medical AB*, Paper 15 at 19 (“[W]e determine that there was material error in the prosecution leading to issuance ... because Choi ... was not considered. It seems that the Examiner was simply not aware of Choi's teachings”).

The Petition is not simply a rehash of art and arguments that have already been substantively addressed by the Examiner. Petitioner is not second-guessing any clear finding by the Examiner with respect to what a particular prior reference does or does not teach. Instead, it appears that the Examiner simply overlooked the most pertinent prior art and mistakenly allowed the claims without any meaningful challenge.

F. Patent Owner Identifies No Compelling Economic or Public Health Interests That Support Discretionary Denial

Patent Owner's alleged \$2.5 million investment in grant funding “related to the '029 patent” (DD Req. at 19-20), does not constitute a compelling economic interest favoring discretionary denial. Patent Owner admits that it has not commercialized the '029 patent. *See Ex1038* at 2-3 (“Plaintiff has never had a Practicing Product....”). If anything, the breadth of the (invalid) '029 patent threatens to stifle innovation in the public health field for entities that actually make products. *See, Amgen, Inc. v. Bristol-Myers Squibb Co.*, IPR2025-00603, Paper 8 at

2 (July 24, 2025) (finding that patent owner's extraordinary investment in research not sufficiently articulated to weigh towards discretionary denial).

III. CONCLUSION

For all the foregoing reasons, review of the '029 patent claims on the merits would be an appropriate use of the Board's resources. Petitioner requests the Director to decline discretionary denial and institute review.

Date: November 20, 2025

By: /Jeffrey C. Metzcar/
Jeffrey C. Metzcar (Reg. No. 52,027)
THOMPSON HINE LLP
10050 Innovation Drive, Suite 400
Dayton, OH 45342

David R. Jaglowski (Reg. No. 58,514)
THOMPSON HINE LLP
41 South High Street, Suite 1700
Columbus, OH 43215

Marla R. Butler (admitted *pro hac vice*)
James A. Rollins (Reg. No. 82,811)
THOMPSON HINE LLP
Two Alliance Center
3560 Lenox Road NE, Suite 1600
Atlanta, GA 30326

Jesse Jenike-Godshalk (admitted *pro hac vice*)
THOMPSON HINE LLP
312 Walnut Street, Suite 2000
Cincinnati, OH 45202

CERTIFICATE OF SERVICE

I hereby certify that on November 20, 2025, I served a true and correct copy of the following materials:

- Petitioner's Opposition to Patent Owner's Request for Discretionary Denial;
- Exhibits 1032 to 1042; and
- Petitioner's Updated Exhibit List

via electronic mail on the following attorneys of record:

Jessica C. Kaiser
kaiser-ptab@perkinscoie.com
PERKINS COIE LLP
1900 Sixteenth St. Suite 1400
Denver, CO 80202-5255

Ramsey M. Al-Salam
ralsalam@perkinscoie.com
PERKINS COIE LLP
1301 Second Avenue Suite 4200
Seattle, WA 98101-3805

Christopher Marando
Marando-ptab@perkinscoie.com
PERKINS COIE LLP
700 Thirteenth Street N.W. Suite 800
Washington, DC 20005-3960

Moeka Takagi
mtakagi@perkinscoie.com
PERKINS COIE LLP
3150 Porter Drive
Palo Alto, CA 94304-1212

and on the email address UofBC-CaptionHealth-IPR@perkinscoie.com, as specified in Patent Owner's Mandatory Notice (Paper 4).

By: / David R. Jaglowski /
David R. Jaglowski (Reg. No. 58,514)
Thompson Hine LLP
41 South High Street, Suite 1700
Columbus, OH 43215