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28United States District Court  
Northern District of CaliforniaUNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

IN RE APPLE PROCESSOR LITIGATION

Case No. [5:18-cv-00147-EJD](#)**ORDER GRANTING DEFENDANT'S  
MOTION TO DISMISS; CONTINUING  
CASE MANAGEMENT CONFERENCE**

Re: Dkt. No. 49, 50

In 2017, independent security researchers discovered an industry-wide computer security vulnerability known as Spectre and Meltdown that directly affected Apple Inc.'s own processors within devices such as iPhones, iPads, iPods, and the Apple TV (collectively "iDevices"). In this putative class action, Plaintiffs Jennifer Abrams ("Abrams") and others similarly situated ("Plaintiffs") are purchasers of such iDevices and allege that Apple Inc.'s ("Defendant") mitigation efforts to patch the vulnerability within the iDevices substantially slowed its processors, bringing a degradation in value and damage to their property. Federal subject matter jurisdiction is based upon Plaintiffs' claim under the Magnuson-Moss Warranty Act, 15 U.S.C. § 2302 and the Class Action Fairness Act. 28 U.S.C. § 1332(d).

Presently before the court is Defendant's motion to dismiss all claims alleged in Plaintiffs' Consolidated Amended Complaint ("CAC") for lack of standing and failure to state a claim. Dkt. No. 46. Having reviewed the parties' papers and having considered the arguments of counsel, the court will GRANT Defendant's motion with leave to amend for Plaintiffs' failure to allege Article III standing.

Case No.: [5:18-cv-00147-EJD](#)  
ORDER GRANTING DEFENDANT'S MOTION TO DISMISS

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**I. BACKGROUND**

Plaintiffs Abrams, Anthony Bartling, Robert Giraldi, and Jacqueline Olson purchased iDevices such as the iPad Pro, iPhone SE, iPhone 6s Plus, iPhone 7, and iPhone 8 in recent years. CAC at 3-4. In 2017, independent research teams from Google Project Zero, Cyberus Technology, and a group of universities discovered two computer security vulnerabilities known as Meltdown and Spectre. Id. ¶ 49. The independent research teams determined that these Defects “apply to all modern processors and affect nearly all computing devices and operating systems.” Id. ¶ 39. Plaintiffs allege these two security vulnerabilities constitute design defects in Defendant’s processors for iDevices (hereinafter “Defects”). Id. ¶ 2. In June of 2017, Google’s Project Zero disclosed the findings to ARM Holdings PLC (“ARM Holdings”), a company that licenses central processing unit (“CPU”) architecture to several large companies. Id. ¶ 50. ARM Holdings in turn notified its licensees, including Defendant, of the Defects. Id.

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On December 2, 2017, Defendant released iOS 11.2, an update to the iOS software that powers certain iDevices, to address Meltdown before it was widely reported. Id. ¶ 40. Defendant did not mention, however, that the purpose of the iOS 11.2 release was to address the Defects. Id. ¶¶ 40, 53. Information concerning the Defects was leaked on January 2, 2018, and published in a New York Times article. Id. ¶ 53. The leak forced Defendant to make a public announcement about the Defects earlier than planned. On January 4, 2018, Defendant released an announcement titled “About Speculative Execution Vulnerabilities in ARM-based and Intel CPU’s.” Id. ¶¶ 40, 53. In the press release, Defendant revealed for the first time that it had released iOS 11.2 to address Meltdown. Id. ¶ 40. On January 8, 2018, Defendant released a separate update, iOS 11.2.2, to address Spectre. Id. ¶ 40. These software updates do not completely solve the Defects; the Defects can only be fixed by replacing the hardware of each iDevice. Id. ¶¶ 3, 38, 44, 52.

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Plaintiffs allege that “recent tests show that such mitigation strategies severely degrade Processor performance by as much as 50%, rendering affected iDevices substantially slower.” Id. ¶ 3. Despite the degraded processor performance, Defendant continues to sell iDevices while promoting their enhanced CPU speed, advanced capabilities stemming from the processors, and

1 exceptional security. Id. ¶¶ 54-80.

2 Plaintiffs bring this action on behalf of a class of “[a]ll persons in the United States who  
3 purchased or leased from Apple and/or its authorized retailer sellers one or more iPhones, iPads,  
4 Apple TVs, or other products containing processors designed or modified by Apple, at any time  
5 since January 1, 2010.” Id. ¶ 81. Plaintiffs also bring this action on behalf of three subclasses  
6 who purchased iDevices during the Class Period. The three subclasses include: (1) a California  
7 Subclass, (2) a New Hampshire Subclass, and (3) a New York Subclass. Id. ¶ 83.

8 Plaintiffs assert sixteen causes of action against Defendant, including: violations of the  
9 California, New York, and New Hampshire consumer fraud statutes (Counts IV-V, IX, and  
10 XXII-XIII); breach of express and implied warranty under California, New York, and New  
11 Hampshire law (Counts I-III, VI-VIII and X-XI); products liability under both negligence and  
12 strict liability under no specified law (Counts XIV and XV); and unjust enrichment under no  
13 specified law (Count XVI). The fraud claims are essentially predicated on allegedly false and  
14 misleading representations touting the speed of Defendant’s iDevice processors. Id. ¶¶ 125, 126,  
15 133, 134. The representations were allegedly false and misleading because Defendant failed to  
16 disclose the Defects, the nature of the Defects, that Defendant’s efforts to mitigate the Defects  
17 would cause impaired performance of iDevices, and that the Defects cannot be fully repaired  
18 without impairing performance of the iDevices. Id.

19 The warranty claims are based upon allegations that (a) the Defects render the processors  
20 in the iDevices unmerchantable and unfit for their ordinary or particular purpose and (b) that after  
21 the iOS updates, the speed and performance of iDevices are not as represented. Id. ¶ 93-118,  
22 139-157, 167-180. Plaintiffs strict liability claim is based upon an allegation that Defendant’s  
23 processors were defectively designed because they contained the Defects. Id. ¶ 192. In the  
24 negligence claim, Plaintiffs allege that Defendant was negligent in failing to use the amount of  
25 care in designing and manufacturing the Apple processors and iDevices that a reasonably careful  
26 designer or manufacturer would have used to avoid exposing others to the risk of harm that (1) the  
27 iDevices would be insecure and subject to invasion of Plaintiffs’ and class members’ personal

1 information, and (2) subject to reduced performance and lost value due to Defendant’s mitigation  
2 efforts. *Id.* ¶ 199. Lastly, Plaintiffs allege that Defendant has been unjustly enriched through the  
3 sales of iDevices at the expense of Plaintiffs and class members because of the conduct described  
4 above. *Id.* ¶¶ 201-206.

5 **II. LEGAL STANDARDS**

6 Article III of the Constitution extends the judicial “Power of the United States” to only  
7 “Cases” and “Controversies.” Art. III, § 2. “Standing to sue is a doctrine rooted in the traditional  
8 understanding of a case or controversy.” *Spokeo, Inc. v. Robins*, 136 S. Ct. 1540, 1547 (2016).  
9 Standing consists of three elements. *Id.* “The plaintiff must have (1) suffered an injury in fact, (2)  
10 that is fairly traceable to the challenged conduct of the defendant, and (3) that is likely to be  
11 redressed by a favorable judicial decision.” *Id.* (citing *Lujan v. Defenders of Wildlife*, 504 U.S.  
12 555, 560-61 (1992)); see also *Maya v. Centex Corp.*, 658 F.3d 1060, 1067 (9th Cir. 2011). At the  
13 pleading stage, the plaintiff must clearly allege facts demonstrating each element. *Id.* at 1547.  
14 “The injury-in-fact requirement requires a plaintiff to allege an injury that is both ‘concrete and  
15 particularized’ and ‘actual or imminent, not conjectural or hypothetical.’” *Spokeo*, 136 S. Ct. at  
16 1548 (citing *Lujan*, 504 U.S. at 560). Under the injury-in-fact requirement, particularity and  
17 concreteness are two separate inquiries. *Robins v. Spokeo, Inc.*, 867 F.3d 1108, 1111 (2017). An  
18 injury is concrete when it actually exists. *Spokeo*, 136 S. Ct. at 1548. Intangible injuries can be  
19 concrete. *Id.* at 1549. For an injury to be “particularized,” as required for Article III standing, it  
20 “must affect the plaintiff in a personal and individual way.” *Id.* at 1548. “In class actions, the  
21 named representatives must allege and show that they personally have been injured, not that injury  
22 has been suffered by other, unidentified members of the class to which they belong and which they  
23 purport to represent.” *Lierboe v. State Farm Mut. Auto. Ins. Co.*, 350 F.3d 1018, 1022 (9th Cir.  
24 2003) (quoting *Pence v. Andrus*, 586 F.2d 733, 736-37 (9th Cir. 1978)); see also *Spokeo*, 136 S.  
25 Ct. at 1547 (adding that injury suffered by other unidentified members of the class to which named  
26 plaintiffs belong is not enough to meet Article III standing).

1 **III. DISCUSSION**

2 Defendant contends that Plaintiffs have not alleged injury-in-fact and lack standing for  
3 three reasons. First, Defendant argues that no named Plaintiff alleges that his or her iDevice was  
4 accessed by Spectre or Meltdown. Dkt. No. 49 at 17. See *Cahen v. Toyota Motor Corp.*, 717 F.  
5 App’x 720, 723 (9th Cir. 2017) (affirming that plaintiffs’ allegations that their vehicle computers  
6 were vulnerable to risk of hacking were speculative and not an injury-in-fact), *aff’g* 147 F. Supp.  
7 3d 955 (N.D. Cal. 2015) (finding an injury-in-fact did not exist based on the risk of future  
8 hacking). In response, Plaintiffs clarify that their claims are not based on a “theoretical risk of  
9 hacking,” but instead “the claims are based on the degradation in the performance and value of  
10 their phones.” Dkt. No. 56 at 13. Accordingly, Defendant’s first argument is not persuasive.

11 Second, Defendant argues that no named Plaintiff alleges that they have downloaded the  
12 updates,<sup>1</sup> much less that the updates caused any degradation in the performance of his or her  
13 iDevice.<sup>2</sup> Plaintiffs acknowledge that they have not, and contend that they need not, allege they  
14 personally experienced a degradation of performance of their iDevices. Instead, Plaintiffs argue  
15 that “general factual allegations of injury resulting from the defendant’s conduct” are sufficient to  
16 establish Article III standing at the pleading stage. Dkt. No. 56 at 13 (citing *Lujan*, 504 U.S. at  
17 561). In the CAC, Plaintiffs point to a few benchmark tests that Defendant used to measure  
18 performance of its iDevices since the updates. CAC ¶¶ 41-43. In particular, Plaintiffs rely on the  
19 JetStream benchmark which showed a slowdown of “less than 2.5%” on iPhone processor  
20 performance following the iOS 11.2.2 upgrade. *Id.* ¶ 41. Plaintiffs also allege that iPhone users  
21 testing the impact of the 11.2.2 upgrade using the GeekBench 4 benchmark test reported that  
22 “processor performance declined significantly more than Apple’s other benchmark testing  
23 suggested, ‘showing a significant decrease in performance up to 50 per cent in most areas’ with  
24 the worst effected applications slowed by up to 56 percent.” *Id.* ¶ 42. Plaintiffs also allege that  
25 the drop in processor performance was confirmed by the U.S. Computer Emergency Readiness

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27 <sup>1</sup> Hr’g Tr. at ¶¶ 13-15.

28 <sup>2</sup> Dkt. No. 49 at 17.

1 Team (“CERT”), an organization within the Department of Homeland Security. *Id.* ¶ 43. Citing  
2 *Strumlauf v. Starbucks Corp.*, 192 F. Supp. 3d 1025 (N.D. Cal. 2016), and *John v. Whole Foods*  
3 *Mkt. Group., Inc.*, 858 F.3d 732 (2nd Cir. 2017), Plaintiffs ask the court to infer from these tests  
4 that their iDevices suffered degraded performance.

5 In *Strumlauf*, class plaintiffs alleged that Starbucks uniformly underfilled lattes and that  
6 plaintiffs would not have purchased lattes “on the same terms” if they had known the lattes were  
7 not the volume represented on Starbucks’ menus (12, 16, or 20 fluid ounces). 192 F. Supp. 3d at  
8 1028. Defendant Starbucks sought to dismiss plaintiffs’ claims for lack of Article III standing,  
9 contending that plaintiffs failed to allege that the particular lattes they purchased were underfilled.  
10 *Id.* at 1029. The *Strumlauf* court held that plaintiffs had sufficiently alleged facts to show that  
11 Starbucks uniformly underfilled lattes and, therefore, it was reasonable to conclude that plaintiffs’  
12 lattes were underfilled, even without plaintiffs measuring their own particular lattes. *Id.* at 1030.  
13 Plaintiffs’ uniform underfilling allegation was based on three theories: (1) the milk foam at the top  
14 of the latte should not be counted toward the total volume of the latte because the industry  
15 standard is to let the foam dissipate, or to measure the drink without the milk foam; (2) all  
16 Starbucks locations used pitchers with marked “fill to” lines that were too low for the finished  
17 product to conform to Starbucks’ fluid representations; and (3) a serving cup’s capacity is the  
18 exact amount that Starbucks represents on its menu and Starbucks’ recipe instructed baristas to  
19 leave at least 1/4 inch of space below the rim of the serving cup. *Id.* at 1030.

20 In *Whole Foods*, the plaintiff filed a class action alleging that Whole Foods Mkt. Group,  
21 Inc. (“Whole Foods”) systematically overstated the weights of pre-packaged food products and  
22 overcharged customers as a result. 858 F.3d at 735. The district court dismissed plaintiff’s  
23 claims, holding that plaintiff lacked Article III standing because he failed to plausibly allege he  
24 was personally overcharged for the cheese and cupcakes he purchased once or twice a month in  
25 2014 and 2015. *Id.* The Second Circuit reversed, finding that plaintiff had alleged a plausible  
26 injury based upon his personal purchasing history and information supplied in a press release  
27 issued by the New York City Department of Consumer Affairs (“DCA”). *Id.* at 737-38. The

1 DCA conducted an investigation from fall 2014 to winter 2015 focusing on eight stores, including  
2 two that plaintiff patronized. *Id.* at 735. According to the DCA’s investigation, at least 89% of  
3 weighted food packages did not meet the federal standard for the maximum amount a package  
4 could deviate from its actual weight. *Id.* at 734. Moreover, the DCA found that Whole Foods’  
5 packages of cheese and cupcakes were systematically and routinely mislabeled and overpriced.  
6 *Id.* at 734-35. The Second Circuit concluded that these allegations satisfied the “low threshold”  
7 required to plead injury-in-fact. *Id.* at 738.

8 In analogizing the instant case to Strumlauf and Whole Foods, Plaintiffs argue that  
9 Defendant’s own testing indicated that the updates caused a slowdown affecting all iDevices.  
10 Plaintiffs’ argument, however, is premised on a self-serving and selective reading of Defendant’s  
11 test results. Although Plaintiffs’ CAC purports to rely on Defendant’s own testing, it omits  
12 Defendant’s finding that its “testing with public benchmarks has shown that the changes in the  
13 December 2017 updates “resulted in no measurable reduction in the performance of . . . iOS as  
14 measured by” multiple tests. Dkt. No. 51, Reuben J. Stob Decl., Ex. C at 1-2.<sup>3</sup> Defendant’s  
15 testing performed on the January 2018 11.2.2 software update to address Spectre similarly  
16 indicated “no measurable impact on the Speedometer and ARES-6 tests and an impact of less than  
17 2.5% on the JetStream benchmark.” *Id.* Thus, Defendant’s testing does not support an inference  
18 that all iDevices suffered from degraded performance as a result of Defendant’s updates.

19 The GeekBench 4 benchmark test relied upon by Plaintiffs also fails to support an  
20 inference that all iDevices suffered from degraded performance because it reports a decrease in  
21 performance “in most areas,” not all areas. The CERT report relied upon by Plaintiffs is also  
22 inconclusive, reporting that “in many cases”—not all cases—the software updates for Spectre and  
23 Meltdown “will have a negative effect on system performance.” CAC ¶ 43.

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25 <sup>3</sup> Defendant’s request to take judicial notice of Exhibit C is granted. Included in Exhibit C is  
26 information posted by Defendant for the public on its website regarding Meltdown and Spectre  
27 and its affected iDevice performance. Plaintiffs refer to and rely on the information contained in  
28 Exhibit C. Under the incorporation by reference doctrine, Exhibit C may be judicially noticed.  
See e.g. *Knievel v. ESPN*, 393 F.3d 1068, 1076-77 (9th Cir. 2005) (considering contents of entire  
website rather than just plaintiff’s proffered portions).



1 Even if the GeekBench 4 benchmark test results and CERT report are construed liberally in  
2 Plaintiffs' favor, these reports only support an inference that some users, not most and certainly  
3 not all users, experienced slower performance in their iDevices. Unlike Strumlauf and Whole  
4 Foods, Plaintiffs have not alleged an injury that is sufficiently concrete and particularized to  
5 establish Article III standing.

6 Lastly, Defendants contend that Plaintiffs cannot manufacture standing by merely alleging  
7 that their iDevices suffered an actual diminution in value. In response, Plaintiffs argue that  
8 overpaying for goods based upon alleged misrepresentations by a manufacturer satisfies the  
9 injury-in-fact requirement for Article III. See, e.g., *Pirozzi v. Apple Inc.*, 913 F. Supp. 2d 840,  
10 846-47 (N.D. Cal. 2012).

11 A recent Ninth Circuit case speaks to this issue. In *Cahen v. Toyota Motor Corp.*,  
12 consumers brought a class action against vehicle manufacturers, alleging that the manufacturers  
13 failed to disclose that their vehicles were susceptible to hacking. 717 Fed. App'x 720 (9th Cir.  
14 2017). The consumers alleged that they had been injured because their vehicles were worth less  
15 than what they paid for them. The Ninth Circuit found plaintiffs' economic loss theory was not  
16 credible and insufficient to establish standing because plaintiffs alleged no facts to show their cars  
17 were worth less. *Id.* at 723. The Ninth Circuit reasoned that plaintiffs had not, for example,  
18 alleged a demonstrable effect on the market for their specific vehicles based on documented  
19 recalls or a decrease in Kelly Bluebook values. *Id.* Nor had plaintiffs alleged that the risk of  
20 hacking was so immediate that they were forced to replace or discontinue using their vehicles, and  
21 thus incurred out-of-pocket expenses stemming from the alleged defect. *Id.* Moreover, the Ninth  
22 Circuit observed that nearly 100% of cars on the market include technologies potentially  
23 vulnerable to hacking. *Id.* In sum, the Ninth Circuit concluded that plaintiffs had failed to plead  
24 sufficient facts to establish Article III standing. *Id.* at 724.

25 Like the plaintiffs in *Cahen*, Plaintiffs here do not allege facts to show their iDevices are  
26 worth less than what they paid for them. Plaintiffs do not allege any facts about the market for  
27 their iDevices. Plaintiffs do not allege that Meltdown and Spectre posed such an immediate risk



1 that they were forced to replace or discontinue use of their iDevices. Nor do Plaintiffs allege that  
2 they were forced to replace or discontinue use of their iDevices due to the alleged degradation in  
3 performance. Instead, Plaintiffs assert conclusory allegations that they “would not have purchased  
4 [their] iDevices, or paid the prices they did.” CAC ¶ 46. Therefore, the court rejects Plaintiffs’  
5 diminution in value argument.

6 In sum, Plaintiffs have failed to allege sufficient facts to establish Article III standing.  
7 Accordingly, the court need not address Defendants’ legal challenges to individual claims.<sup>4</sup>

8 **IV. CONCLUSION AND ORDER**

9 For the foregoing reasons, Defendant’s motion to dismiss is GRANTED with LEAVE to  
10 AMEND. Plaintiffs may file and serve an amended complaint no later than January 24, 2019.  
11 The Case Management Conference scheduled for January 17, 2019 is continued to May 2, 2019 at  
12 10:00 a.m. Parties shall file a Joint Statement in accordance with Civil Local Rule 16-9 no later  
13 than April 22, 2019.

14 **IT IS SO ORDERED.**

15 Dated: January 2, 2019



EDWARD J. DAVILA  
United States District Judge

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26 <sup>4</sup> Defendant requests judicial notice and incorporation by reference of Exhibits A through H. Dkt.  
27 No. 50. Plaintiffs object to all but Exhibits A, E, and G. Dkt. No. 57. Because Plaintiffs have  
28 failed to allege standing and the court has declined to address Defendant’s legal challenges to  
individual claims, Defendant’s request for judicial notice is denied as moot, except as to Exhibit  
C. For reasons previously discussed, the court takes judicial notice of Exhibit C. See n. 1.  
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