

# EXHIBIT 10

**Exhibit 10: Infringement of U.S. Patent No. 10,638,941 by Apple Watch<sup>1</sup>**

Apple Watch	
Claim	
1.P	The Accused Products perform a method of cardiac monitoring.
1.1	<p>The Accused Products sense an activity level of a user with a first sensor on a smartwatch worn by the user.</p> <p>For example, the Apple Watch Series 6 contains an accelerometer and gyroscope that are both used to measure the user’s motion and activity. <a href="https://support.apple.com/kb/SP826?locale=en-IN">https://support.apple.com/kb/SP826?locale=en-IN</a>. In its guidance to its developers, Apple also states that a developer “can use motion data” from the Apple Watch’s accelerometer and gyroscope to “gauge the wearer’s activity level.” <a href="https://developer.apple.com/design/human-interface-guidelines/watchos/interaction/accelerometer-and-gyroscope/">https://developer.apple.com/design/human-interface-guidelines/watchos/interaction/accelerometer-and-gyroscope/</a>.</p> <p>The Accused Products when the activity level is resting, sense a heart rate parameter of the user with a second sensor on the smartwatch.</p> <p>Apple’s de novo classification request to the FDA describes the Apple Watch’s irregular notification feature.</p> <p><b><u>Platform/PPG</u></b>  <b>The Irregular Rhythm Notification Feature leverages heart rate data collected from the commercially available PPG sensor on Series 1 and later Apple Watch platforms. The Apple</b></p>
1.2	<p>when the activity level is resting, sensing a heart rate parameter of the user with a second sensor on the smartwatch;</p>

<sup>1</sup> This chart describes infringement by the Apple Watch Series 6, an exemplary Accused Product. The Accused Products include the Apple Watch Series 6, the Apple Watch Series 5, and the Apple Watch Series 4. The infringement analysis in this chart is preliminary and AliveCor’s investigation into Respondent’s infringement is ongoing. AliveCor reserves the right to provide additional theories under which Respondent’s products infringe this patent.

**INDICATIONS FOR USE**

The Irregular Rhythm Notification Feature is a software-only mobile medical application that is intended to be used with the Apple Watch. The feature analyzes pulse rate data to identify episodes of irregular heart rhythms suggestive of atrial fibrillation (AFib) and provides a notification to the user. The feature is intended for over-the-counter (OTC) use. It is not intended to provide a notification on every episode of irregular rhythm suggestive of AFib and the absence of a notification is not intended to indicate no disease process is present; rather the feature is intended to opportunistically surface a notification of possible AFib when sufficient data are available for analysis. **These data are only captured when the user is still.** Along with the user's risk factors, the feature can be used [https://www.accessdata.fda.gov/cdrh\\_docs/reviews/DEN180042.pdf](https://www.accessdata.fda.gov/cdrh_docs/reviews/DEN180042.pdf).

1.3 determining, by a processing device, that a discordance is present between the activity level value and the heart rate parameter;

The Accused Products determine, by a processing device, that a discordance is present between the activity level value and the heart rate parameter.

The Accused Products contain a processor. For instance, the Apple Watch Series 6 contains the S6 System in Package, (SiP), described in Apple's Technical Specifications. [https://support.apple.com/kb/SP826?locale=en\\_IN](https://support.apple.com/kb/SP826?locale=en_IN).

Apple's de novo classification request to the FDA describes the Apple Watch's irregular notification feature.

**Platform/PPG**

**The Irregular Rhythm Notification Feature leverages heart rate data collected from the commercially available PPG sensor on Series 1 and later Apple Watch platforms. The Apple**

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<p>1.4 based on the presence of the discordance, indicating to the user, using the smartwatch, a possibility of an arrhythmia being present; and</p>	<p>The Accused Products based on the presence of the discordance, indicating to the user, using the smartwatch, a possibility of an arrhythmia being present.</p> <p>“The irregular rhythm notification feature on your Apple Watch will occasionally look at your heartbeat to check for an irregular rhythm that might be suggestive of atrial fibrillation (AFib).” <a href="https://support.apple.com/en-us/HT208931">https://support.apple.com/en-us/HT208931</a>. “You can take an ECG at any time, when you’re feeling symptoms such as a rapid or skipped heartbeat, when you have other general concerns about your heart health, or when you receive an irregular rhythm notification.” <a href="https://support.apple.com/en-us/HT208955">https://support.apple.com/en-us/HT208955</a>.</p>
<p>1.5 receiving electric signals of the user from an electrocardiogram sensor (“ECG”) on the smartwatch to confirm a presence of the arrhythmia, wherein the ECG sensor comprises a</p>	<p>The Accused Products receive electric signals of the user from an electrocardiogram sensor (“ECG”) on the smartwatch to confirm a presence of the arrhythmia, wherein the ECG sensor comprises a first electrode and a second electrode.</p> <p>Apple’s ECG sensor comprises two electrodes. As Apple Support explains, “Apple Watch Series 4, Series 5, or Series 6 also have built-in electrodes in the Digital Crown and the back of Apple Watch.” <a href="https://support.apple.com/en-us/HT204666">https://support.apple.com/en-us/HT204666</a>.</p> <p>This information is also contained in Apple’s de novo classification request to the FDA for the Apple Watch’s ECG app. The Apple Watch contains two electrodes that comprise the ECG sensor:</p>

**Claim**

first electrode and a second electrode.

**Apple Watch**

The ECG Watch App instructs the user to take an ECG measurement by holding their finger on the digital crown of the watch. The watch also contains electrodes on the back of the device which are in continuous contact with the user's wrist. The watch acquires the electrical potential between the electrodes and digital crown. The Watch App will display a visual representation of

[https://www.accessdata.fda.gov/cdrh\\_docs/reviews/DEN180044.pdf](https://www.accessdata.fda.gov/cdrh_docs/reviews/DEN180044.pdf).

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results. Labeling is also required to help the user interpret the results they receive. Here, the labeling specifically states that the feature is not intended to replace traditional methods of diagnosis and that diagnosis for AF should still be done by ECG confirmation.

*Id.*

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