

**FDA Webinar: Final Guidances on "Deciding When to Submit a 510(k) for a Change to an Existing Device" and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device"**  
**Moderator: Irene Aihie**  
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**1:00 pm ET**

Coordinator: Welcome and thank you for standing by. At this time all participants are in a listen only mode until the question and answer session of today's conference. At that time to ask a question press Star 1 on your phone and record your name at the prompt.

This call is being recorded. If you have any objections, you may disconnect at this time. I would now like to turn the call over to Irene Aihie. Ma'am, you may begin.

Irene Aihie: Hello and welcome to today's FDA webinar. I am Irene Aihie, of CDRH's Office of Communication and Education.

On October 25, 2017 the FDA released two final guidance documents: Deciding When to Submit a 510(k) for a Change to an Existing Device, which defines the medical device changes broadly, and Deciding When to Submit a 510(k) for a Software Change to an Existing Device, which focuses on software specific changes and complements the broader guidance documents.

Today Rebecca Nipper, Acting Associate Director for Regulations and Guidance, and Linda Ricci, Associate Director for Digital Health, both in the

Office of Device Evaluation here in CDRH, will present an overview of the final guidances.

Following the presentation we will open the lines for your questions related to information provided during the presentation. Additionally, there are other subject matter experts here with us today to assist with the Q&A portion of our webinar.

Now I give you Rebecca.

Rebecca Nipper: Thank you and good afternoon, or I guess morning for those of you on the West Coast. And thank you for joining us for the industry webinar on two recently published final guidance documents regarding when to submit a 510(k) for a change to an existing device. My name is Rebecca Nipper, and with Linda Ricci I'll be giving an overview of both guidance documents.

We'll start by going over some background on 510(k) device modifications generally, including the regulatory basis for our decision making. We'll then describe how these guidances were developed, and our goals for the policy in these final guidances. We'll walk through the highlights of each guidance, and there should be adequate time at the end for questions and answers.

At a time when medical technology is rapidly evolving, we wanted to develop guidance that provides essential flexibility to industry and FDA regarding when submission is required for device modifications instead of rigidly defining the types of changes that require FDA review. We think this will enable innovation and ensure agency oversight only when necessary. This strategy is also intended to ensure patients and providers have timely access to modified devices.

There are two primary regulations that form the basis for our modifications policy: 21 CFR 807.81(a)(3) which describes when a new 510(k) is required due to a change or modification to a device, and 21 CFR 820 which is the quality system regulation.

I won't read the entire text of 807.81(a)(3), but emphasis has been added to two of the most important elements of the regulation that describe what constitutes a significant change or modification that requires a new 510(k) submission. Specifically, FDA requires a new 510(k) submission when the modifications could significantly affect the safety or effectiveness of the device or the change is a major change or modification in the intended use of the device.

Due to the subjectivity of "significantly" and "major," these phrases sometimes lead to different interpretations, and these guidance documents seek to clarify our interpretation of these key terms.

In developing this guidance we also carefully considered the role that the quality system regulation 21 CFR Part 820 plays in changes to devices. For some types of changes to a device we believe that submission of a new 510(k) is not required, and that reliance on existing quality system requirements is the least burdensome approach to regulation of the change.

Regardless of whether a change requires submission or review, the quality system regulation requires manufacturers of finished medical devices to review and approve changes to device design and production, and document changes and approvals in the device master records.

As specifically shown here, 820.30(i) outlines the manufacturer's obligations regarding design changes. We want to emphasize that whether or not a new

510(k) is necessary, robust documentation of device modifications is helpful to both FDA and manufacturers.

During both the initial drafting and the finalization of these guidances, stakeholder feedback was actively sought in order to focus the revised guidances, not just on changes that FDA felt were important, but also on updates that other stakeholders would find valuable. Avenues for feedback included the draft guidances as well as the 2013 public meeting.

In the feedback we received, what we consistently heard was that there was a consensus around retaining the basic structure and paradigm in the original “Deciding When to Submit” guidance often referred to as the K97 guidance. There was agreement that clarification was needed in certain targeted areas, and that FDA should explore greater reliance on risk management and the quality system regulation where appropriate.

Based on that feedback, we made some targeted changes in comparison to the original K97 guidance. Most importantly we wanted to provide added clarity overall, but specifically around the interpretation of the key regulatory terms such as “could significantly affect.” We updated the flow charts and made sure that they aligned with the text so that they could serve as a companion to but not a substitute for the text within each section.

We updated the key principles underlying the decision paradigm, made some updated changes regarding the underlying decision – oops – made some updated changes regarding the materials section and added a large number of illustrative examples. We also added an appendix with documentation recommendations and examples in order to demonstrate how the complexity of documentation could vary depending on the complexity of the device change.

We also decided to create a separate software guidance based on the same key principles, and added a risk assessment paradigm to the decision-making process for all changes.

While Linda will go into the details of the software modifications guidance, I wanted to outline the scope of each guidance and highlight areas of alignment. Both guidances apply to legally marketed devices subject to 510(k) requirements, which means that PMA devices and 510(k) exempt devices are outside the scope.

While the general guidance does not apply to software systems changes, it does apply to non-software changes to software devices or devices containing software. For example, labeling changes would be assessed under the general guidance. You will also see that the guiding principles are consistent between the two guidances.

The software guidance does not apply to software for which FDA has stated in guidance that we do not intend to enforce compliance with applicable regulatory control. The software guidance also does not address other software related concepts like the software life cycle, what documentation should be included in a 510(k) for a software modification, or the principles that are applied to the validation of medical device software.

We want to highlight that when there are multiple changes that affect the labeling or hardware in addition to software, the changes should be assessed using both guidances. And if either guidance leads to a new 510(k) conclusion, then submission of a new 510(k) is likely required.

For example, if you wanted to add a new mode to a software only device, you would assess the change under the software modifications guidance. You would only need to use the general modifications guidance if there was also labeling revisions or changes to the indications for use are warranted based on the new mode. Similarly, if a new mode were added to an infusion pump, you would use the software modifications guidance for the software revisions, and then the general modifications guidance for the change to the pump specifications.

Both guidances have ten guiding principles that are the essential principles necessary for use of the documents. Previously in K97 these were referred to as assumptions and axioms. These principles are intended to be used in conjunction with the more specific guidance sections.

Note that the order in which I present these may not be consistent with the guidance. But the first guiding principle relates to modifications made with the intent to significantly affect the safety or effectiveness of the device, as the regulation states that a change that could significantly affect safety or effectiveness requires a new 510(k).

It is therefore the first principle that if there's a change that is intended to significantly affect the safety or effectiveness of a device, for example to address an adverse event, that change would likely require a new 510(k) submission. However, changes not intended to significantly affect safety or effectiveness should be evaluated using the rest of the guidance.

The next guiding principle relates to the assessment of "could significantly affect" and the role of testing. An initial risk based assessment should be conducted using the concepts in this guidance to make an initial determination of whether a new 510(k) is necessary. If the initial decision following the risk

based assessment is that submission of a new 510(k) is not required, this decision should be confirmed by successful routine verification and validation activities.

If routine verification and validation activities produce any unexpected results, any prior decisions that submission of a new 510(k) is not required should be reconsidered. This concept is discussed further in Sections B and D of the guidance. If the result of a risk based assessment is that a change could significantly affect safety or effectiveness, submission of a new 510(k) is required even if routine verification and validation activities are conducted successfully without any unexpected results.

The next guiding principle addresses unintended consequences of changes. The concept of this is that after you consider whether the change was made with the intent to significantly affect safety or effectiveness, you should also consider whether the change could have unintended consequences.

For example, changes in sterilization may unintentionally affect device materials, or changes to materials may unintentionally affect the performance of the device. Any unintended consequences such as these should be evaluated according to the relevant flow charts and their companion text to determine whether submission of a 510(k) is required.

The next guiding principle relates to the use of risk management, which plays a central role in determining when a change could significantly affect safety or effectiveness as previously mentioned. This assessment is intended to leverage a manufacturer's existing risk processes to determine when a change requires a 510(k). A risk based assessment is referred to throughout the document – as referred to throughout the document is based on the

combination of multiple risk concepts that are important for managing the risks of medical devices.

The concept of risk as defined in the FDA recognized consensus standard ISO14971 is the combination of the probability of occurrence of harm and the severity of that harm. Although the risk terminology used in this document is primarily derived from ISO14971, we recognize that an individual manufacturer's terminology may differ, but the concepts remain the same.

Because the regulation requires submission of a new 510(k) when a change could significantly affect safety or effectiveness, both safety and effectiveness should be considered in evaluating a device's risk profile, and performing a risk based assessment as explained in Section E.

The next principle addresses the evaluation of simultaneous changes and simply states that when there are multiple changes, they should be assessed both separately and together. Next the guiding principles describe an appropriate comparative device and the cumulative effect of changes.

When determining whether a particular change requires submission of a new 510(k), you should conduct a risk based assessment that compares the changed device to the device as previously found to be substantially equivalent in your most recently cleared 510(k). The appropriate comparative device is referred to as the original device throughout the guidance document.

In some cases you may make a number of changes without having to submit a new 510(k). But each time you make a change the modified device should be compared to the original device. When the cumulative effect of individual changes triggers the regulatory threshold for submission, you should submit a new 510(k).

The next guiding principle relates to the documentation requirements. Whenever you make a change to a device, you must comply with the quality system regulation which requires among other things that device changes be documented. The scope and type of documentation may vary, but the process of documenting the decisions described in this guidance should be established as part of your own quality system.

The next guiding principle describes what should be included in 510(k) submissions for modified devices. When a new 510(k) is submitted for a device with multiple changes, that 510(k) should describe all changes that trigger the requirement for submission of a new 510(k).

To help ensure that FDA has a complete understanding of the device under review, that 510(k) should also describe other changes since the most recently cleared 510(k). In other words, those that did not require submission of a new 510(k) that would have been documented as part of the first 510(k) for that device.

For instance, 510(k)s typically include a listing of device warnings on the labeling. So if a warning in the device's labeling has been changed, that change should be described in the new 510(k), even if that change itself did not trigger the requirement for submission of a new 510(k). However, a 510(k) would not typically identify or describe individual components of a circuit board, such as resistors. And therefore we would not expect changes to the resistors to be listed in the new 510(k) for a modified device because the original 510(k) would not have included information about the resistors.

If you make multiple changes to a device but only one change triggers the requirement for submission of a new 510(k), the changes that do not require

submission of the new 510(k) may be immediately implemented, so long as those changes can be implemented independently of changes that do require submission of a new 510(k). Those changes should however also be described in the new 510(k) for the change that does require submission.

The last guiding principle is a reminder that even though you may correctly follow this guidance and submit a new 510(k) when necessary, a substantially equivalent determination is not assured.

These guidances use flow charts and text to guide you through the logic scheme we recommend to arrive at a decision on whether to submit a new 510(k) for a change to an existing device. A single logic scheme containing all the necessary steps would be large and difficult to navigate. Therefore, for ease of use, the single scheme has been broken down into smaller sections with corresponding text and flow charts. As a reminder, the flow charts are intended as a visual aid, and do not capture all necessary considerations.

All labeling changes should be evaluated using the logic scheme in Section A that concentrates on changes in indications for use, and applies a risk based assessment framework for determining whether submission of a new 510(k) is required. This section focuses on changes to the indications for use and changes to other places – pieces of the labeling that could affect the indications for use.

Rather than assessing the intended use of the device specifically, since a new intended use would indicate that the device was no longer within the 510(k) paradigm, like the K97 guidance, this guidance refers to the changes that have a major impact on the intended use of the device including certain indications for use changes.

Whether the change is to the indications for use statement or to other parts of the labeling that affect indications for use, the guidance first describes common indications for use changes that likely do or do not require new 510(k)s, such as a change from single use to reusable or a change from prescription to over the counter.

It then walks through indications changes that depend on a variety of factors and recommends the factors that should be considered. Factors that could affect the indications for use include but are not limited to patient population, use environment, or frequency and duration.

For example, for a change in use environment you should consider whether the device user changes, like the training of the user or whether the environment presents different challenges such as lower levels of cleanliness or different sources of electrical interference. Either to assist in this type of assessment or for labeling changes that do not affect the indications for use, a risk based assessment should be conducted to identify any new or significantly modified existing risks in order to determine if a new 510(k) is likely required.

Section B relates to technology, engineering and performance changes. These types of changes encompass a broad span of device activities, from minor engineering changes to a circuit board layout to a change from electromechanical to microprocessor control of device function.

These changes should be evaluated using the scheme, and then the changes should be verified and/or validated according to the quality system requirements. This section begins with recommendations on a few specific changes such as fundamental device changes that almost always require a new

510(k) submission, or sterility in packaging changes which should be further assessed with some targeted questions.

It then assesses all other technology changes through a series of questions relating to if the change significantly affects the use of the device, if a risk based assessment identifies any new or significantly modified existing risks, if clinical data is necessary, and finally, if there are any unexpected results from the verification and validation activities.

As I mentioned in the guiding principles, all changes to device design should undergo some level of design verification and/or validation or evaluation to ensure that the device continues to perform as intended. You should make an initial risk based assessment of whether a change requires submission of a new 510(k). And if after an initial assessment that submission of a new 510(k) is not required, you should conduct routine verification and validation activities to ensure that no new issues of safety or effectiveness are raised.

If successful verification and validation activities confirm the initial assessment, you should proceed with the design change and document the assessment. Occasionally routine verification and validation activities may either produce unexpected results or otherwise prove to be inadequate to verify and/or validate the modified design. In such instances a new 510(k) is likely required.

Similar to the concepts in K97, if you encounter unexpected results performing routine verification and validation activities, for example the device does not perform as expected, prespecified acceptance criteria are not met or testing demonstrates unexpected safety or effectiveness issues, the initial risk based assessment should be reevaluated.

If different verification and/or validation test methods or acceptance criteria are necessary to produce the expected results, it is likely that the change could significantly affect safety or effectiveness, and thus submission of a new 510(k) is likely required.

Section C of the guidance is specific to materials changes. It focuses on a risk assessment of material changes using similar biocompatibility risk assessment principles as described in FDA's biocompatibility guidance. It begins by assessing if the new material has any new or increased biocompatibility concerns compared to the unmodified material, and if so, if the same material has been used by the same manufacturer previously in a similar device.

If so, you may be able to determine that the new material could not significantly affect safety or effectiveness. If not, a new 510(k) is likely required. If there are no new or increased biocompatibility concerns or the material doesn't have direct or indirect patient contact, you should also assess if the change could affect device performance. If so, you would evaluate the change also as a technology change.

Section D focuses on changes in technology, engineering performance or materials of an IVD. Modifications to IVDs other than to the labeling are assessed using this IVD specific section, while the guiding principles, labeling and risk assessment sections of this guidance continue to apply to IVDs.

Changes assessed using this scheme can include changes made to reagents or changes to a test method or protocol among other things. For IVDs performance generally refers to the analytical and clinical specifications established as part of the most recent 510(k) clearance.

The analysis is similar to that found in the non-IVD technology and materials sections, but is tailored to use language relevant to IVDs in explaining how decisions should be made for IVDs. Like the other sections, it focuses on a risk based assessment and changes that can affect IVD performance.

Section E describes considerations for performing risk based assessments of modified devices. As discussed throughout the document, a device modification that leads to a significant change in the device's risk profile likely requires submission of a new 510(k). You should use the risk based assessment considerations discussed in this section in conjunction with the logic schemes and decision-making flow charts in the previous sections.

Although FDA recommends that manufacturers use an accepted method of risk assessment such as ISO14971, this guidance uses terminology distinct from ISO14971.

In general, the assessment of risk in deciding whether to submit a new 510(k) should identify all possible risks associated with the change or modified device, and then focus on risks whose existence and characteristics are supported by objective scientific evidence. It is generally not necessary to focus on hypothetical risks that are not supported by scientific evidence or those that are determined to be negligible, due to both the low probability of occurrence and low severity of harm. You should then explore the severity and probability of occurrence of the harm to determine whether the device change could significantly affect safety or effectiveness and requires submission of a new 510(k).

Although ISO14971 defines risk in terms of device harms and their effects on safety, it is important to note that whether submission of a new 510(k) is required depends on whether the change could significantly affect the safety

or effectiveness of the device. Therefore you should also consider the possible affects a device change may have on device effectiveness.

As with safety risks, you should consider the probability and severity of impacts to device effectiveness. In considering a device change's effects, you should also consider the criticality of the device feature being modified to the safe and effective use of the device. Then certain features are more critical than others.

For instance, the outer case of a ventilator, although important to the overall design of the device, is not as critical to the safe and effective use of the device as the pump that circulates air to the patient. Note that labeling changes which affect user actions can be critical as well.

Appendix A gives over 30 hypothetical examples that are intended to illustrate the process of determining when a 510(k) is required. We include examples of results both in the need to submit and the need only for documentation to the file, and also include multi-part iterative examples to demonstrate how different factors can have an impact on the decision outcome.

For example, each example follows a similar format, walking through the relevant questions with explanations for the response of each step, and why or why not the ultimate decision would be to submit or not submit a 510(k). It is important to note that these examples cannot account for every possible scenario, and are not intended to be definitive.

I won't walk through this entire example, but you can see the format where we describe the change, and then assess each relevant question using the applicable logic scheme, finally arriving at the likely decision.

Whenever you change a device you must take certain actions to comply with the quality system regulations unless a regulatory exemption exists. The quality system regulation requires that design changes in production and process changes be documented prior to implementation. If you determine that the device changes do not require submission of a new 510(k), you should document the decision-making process and the basis for that conclusion.

The documentation should be prepared in a way that an FDA inspector or other third party can understand what the change is and the rationale underlying your conclusion that submission of a new 510(k) is not required. We want to note that only highlighting the flow chart in this guidance document or simply answering yes or not to each question without further details or justification is not sufficient documentation.

Appendix D provides recommendations on the basic elements of good documentation that every manufacturer should use. It also provides examples of documentation that can be adapted to the complexity of a given change.

I'll now turn it over to Linda who will walk through the software guidance.

Linda Ricci: Hello. Now we're going to switch to discussing the guidance "Deciding when to submit a 510(k) for a software change to an existing device".

The software modifications guidance as I will call it for short, has the same general principles as the general guidance that Rebecca just discussed. In this section of the presentation, we're going to talk about the software specific policy which is made up of four questions plus some additional considerations. This guidance also contains software specific examples in the appendix.

Shown here is the flow chart from the guidance that describes the policy for how to determine if you need to make a submission for a change to a software device. We're going to walk through each question in specifics.

So for Question number one, it asks "Is the change made solely to strengthen cyber security and does not have any other impact on the software or the device". It is important to remember that cyber security is a continuing issue for the center. We expect all devices to be able to be updated in the field, and therefore they would need to continue to update their cyber security aspects.

A majority of these changes for cyber security are referred to as patching. These are routine cyber security updates, and as we have said in many guidance documents related to cyber security, routine patching often does not require a 510(k). So when answering this question, if there are no other changes to the software or the architecture that are included in this change for cyber security and the change does not have any impact on the device, it is likely that a new submission would not be required. If you answer no to this question, then you would continue to the next question.

Question 2 is does the change – "Is the change made solely to return the system into the specification of the most recently cleared device". This question is addressing changes that might be made to the software that were originally specified for the original device. To answer yes to this question, it is important to remember that the specification is for the most recently cleared device.

It is also important to remember that the change should not have an overall impact on the device that could significantly affect safety, effectiveness or intended use. If you answer yes to this question, then you would document

the change that has been described previously along with the rationale. If you answer no, then you would continue to Question 3.

Question 3 is really a two-part question and presents the biggest change from the structure of the document as compared to the draft. In this question we talk about all risk aspects for determining if the change would significantly impact. So in Question 3A we are discussing – or the question asks ”Does the change introduce a new risk or modify an existing risk that could result in significant harm and that is not effectively mitigated in the most recently cleared device”.

In this criteria for assessing, if you – how to answer this question, you want to consider if the change creates a new or modifies an existing hazard, hazardous situation, or cause in the risk management files. The level of harm associated within your modified hazard, hazardous situation or cause is serious or more severe, and if the hazard and hazardous situation or cause is not already effectively mitigated in the most recently clear device. If all the criteria are met, then a new 510(k) is likely required. If the answer is no to this, then you continue to Question B – 3B.

Question 3B discusses risk control measures that are necessary. So the question is specifically “Does the change create or necessitate a new risk control measure or a modification of an existing risk control measure for a hazardous situation that could result in significant harm”. In this particular question you need to determine whether there are changes or additions of risk control measures that are necessary due to either new, modified or previously unknown hazardous situations or causes, and if the change to the risk controls are necessary to prevent significant harm.

A submission is also not likely required when implementing redundant risk control. So if you determine that the hazardous situation is adequately mitigated and you're adding redundant risk control, then it's not likely that you would need a 510(k) just to add that additional risk control. If the answer to this question is no, then you would continue to Question 4.

Question 4 discusses the effectiveness aspect of could change significantly impact. So in this question if the change could significantly affect clinical functionality or performance specifications that are directly associated with the intended use of the device. This question is addressing whether there are additional or changes to clinical functionality or performance specifications.

Now these changes would need to be directly associated with the intended use. We understand that often there can be changes that could fall under the clinical functionality or performance specification label, but do not directly impact the intended use or are not directly associated with the intended use. For these specific changes we are looking at those that are directly associated with the intended use.

If the answer to this question is yes, then a new 510(k) is likely required. If the answer is no, then we ask you to go to the additional factors to consider if any of those apply in making your determination if the new 510(k) is required.

Software often can be changed in a number of ways for maintenance or just general infrastructure changes. We wanted to identify these various changes that could happen to software throughout its life cycle and talk about them as the additional factors in this guidance. So we list a number of them including changes such as changes to the infrastructure, changes to the overall architecture, or changes to the core algorithm.

Additionally we talk about clarification of requirements where there is no change to the functionality of the software or cosmetic changes. Now clarification to the requirement would be changes that are to the documentation itself and not necessarily to the software itself. Oftentimes this is done for readability or to provide better maintenance. Cosmetic changes where there are no changes to the functionality again would not likely impact the clinical use of the device.

And lastly under additional factors we discuss reengineering or refactoring. These are software maintenance techniques and basically are looking at how you can redo the software or reengineer the software in different ways. Reengineering is talking about the examination or alteration of software to reconstitute it in a new form, whereas refactoring is a discipline technique for restructuring a software's internal structure.

As I mentioned earlier, the software guidance also has its own set of examples. The examples focus on each of the questions asked and provides the rationale for the question at hand. So in this example the question at hand is Question 3A. We provided scenarios through the description, the question that we're answering, the answer for the question and the rationale for that answer and finally the outcome.

Now I would like to turn it over for questions.

Coordinator: Thank you. We'll now begin the question and answer session. If you would like to ask a question, please press Star 1 on your touchtone phone. Make sure your phone is unmuted and record your name clearly when prompted. Your name will be required to introduce your question. If you need to withdraw your question, please press Star 2.

Again to ask a question press Star 1 and record your name. It will take a moment for questions to come through. Please stand by.

Rebecca Nipper: As we get ready to answer questions from the phone, I wanted to note that we have had a few questions since the guidance was published regarding what we refer to as a CBE 510(k) or a “changes being effected.” This exact language was also included in the K97 guidance, so the concept should not be new.

The concept is similar to the special 510(k) corrective action being affected found in the K95-1 recall guidance, although the two should not be confused. As we state in the modifications guidance, it’s a special 510(k) submission used only to add a contraindication, and it can be implemented prior to clearance of the special 510(k).

Irene Aihie: Operator, we’ll take our first question.

Coordinator: Thank you. The first question comes from (Alco Mall). Your line is open.

Irene Aihie: (Alco), we are unable to hear you on conference. Could you please check your mute button?

(Alco Mall): Oh yes, I think I made a mistake. I don’t have a question.

Coordinator: Very good. Our next question comes from (Mark McCarty). Your line is open.

(Mark McCarty): Hi. Thank you very much for taking the question. This question is in connection with cosmetic changes under the software 510(k) changes guidance that was just discussed by Ms. Ricci.

You know one of the things that occur to me in that context was a change to, a cosmetic change, you know, might be construed as one that changes the appearance of a device where there might be human factors engineering considerations. Are you able to kind of fill in a little bit where cosmetic change would not – would and would not seem to affect the usability of a device and hence, you know, maybe or maybe does not require any kind of human factors and thus triggers a new 510(k)?

Sorry if I stumbled there. Hopefully the gist of the question got across to you.

Linda Ricci: Sure. No, I understand your question. So certainly there could be a number of cosmetic changes that would not necessarily require usability testing or any kind of human factors testing. They could be things as simple as changing the flash screen for your device or changing the logo for your company name. I mean those are two things that come to mind immediately that are definitely cosmetic changes that are unlikely to require a new 510(k).

I would like to say that when determining whether or not you would need to do human factors testing for other changes to a user interface, you should be following your own internal procedures through your design controls that determine when you would need to do that kind of testing. It's also not necessarily – excuse me. You're not necessarily going to need to submit a new 510(k) just because you had to redo your human factors testing to demonstrate that your usability has not changed due to a change in the user interface.

So I would really – when you're looking at cosmetic changes, for the software guidance this is really talking about changes to perhaps the screen layout that are not indicative of strong changes to the usability. You know if you are making strong changes to the usability, then I would definitely look at how

that could impact your risk mitigation perhaps rather than considering it just a cosmetic change.

(Mark McCarty): Okay.

Linda Ricci: Does that make sense?

(Mark McCarty): Yes, absolutely. Thank you very much. I appreciate it.

Coordinator: And for participants, we are taking questions through the phone lines only. So if you'd like to ask a question, please press Star 1 and record your name.

The next question comes from (Laura Crosky). Your line is open.

(Laura Crosky): Hi. Thank you for taking the question. I had a question for Rebecca regarding the general guidance. When the general guidance makes reference to a risk assessment being performed in accordance with 14971, I wanted to understand what the expectation of the FDA is around that.

Would completion of a hazard analysis be sufficient? Or is a design risk assessment required and a process risk assessment required even if the proposed change isn't impacting either of those two categories?

Rebecca Nipper: So I think we purposely chose terminology in the guidance of a risk based assessment. And it may be different than your formal risk assessment that you're used to doing, you know, for your internal processes. I think really what we're looking for, if you read through the guidances, is an assessment of any new risks or significant changes to known risks, and how those play into the decision-making process for whether a new 510(k) is needed.

So it may be a little different than your formal 14971 risk analysis. That may be a document that can feed into your decision analysis, but it is a little bit different.

(Laura Crosky): Okay, thank you.

Coordinator: Our next question comes from (Bethany Hudson). Your line is open.

(Bethany Hudson): Hello. I have a question in regard to the indications for use change. In the event that the indications are staying exactly the same but it's changing to a different part of the body, would that still be considered a new 510(k) if the device itself isn't really performing any – it doesn't have any functionality in relation to addressing the disease. It's only a plug.

So it's just moving to another part of the body, and the indications are the same. Would that still be required to be submitted under a 510(k)?

Rebecca Nipper: So I think you should look at Sections or Questions A4 and A5 in the guidance. That specifically talks to changes in patient population as well as changes in area of the body. I think it's under A5 where we specifically talk about a change in body part or area to of device – area of the body that the device is applied to.

And so I think that could be part of a risk based assessment. And you would determine whether or not a new 510(k) is necessary based on your risk based assessment. I don't think there's any one size fits all answer to moving from one part of the body to another.

(Bethany Hudson): Okay, great. Thank you very much.

Coordinator: The next question comes from (Jennifer Marsh). Your line is open.

(Jennifer Marsh): Hi, yes. I was curious to know what the expectation is from FDA on the implementation timeline for this.

Rebecca Nipper: So I think the guidance – there's no delayed implementation. I think our expectation is that sponsors are already making these decisions, and the paradigm hasn't really shifted. And so I don't really think there's any delayed implementation of the guidance. I think it should kind of be what companies are doing already.

Irene Aihie: And we'll take our next question.

Coordinator: Next question comes from (David Thomas). Your line is open.

(David Thomas): Yes, hi. Thanks for taking my question. My question is around a material change, and if you change say from a lead contacting material from say a polyethylene material from one supplier to another, and you determine you still do biocompatibility testing on that material because you would for a new material but that biocompatibility testing doesn't show any new concerns based on the risks. Would that then necessarily lead to a new 510(k) for that type of change?

Rebecca Nipper: It really depends on the specifics around the change and if you've used that other – that material previously in a similar type of device. We do address supplier changes in the guidance and how that could play into a risk-based assessment, so I would encourage you to look specifically in section C and follow that thought process to see whether or not in your specific case that would require a new 510(k) or not.

You know, as we note, that you can't necessarily test out of a new 510(k)510(k), so if the change could significantly affect the safety or effectiveness you would need a new submission. Whether or not testing demonstrates that there is not a change in safety or effectiveness.

(David Thomas): Okay, so if I understand correctly, then even if the testing demonstrates there's no issues with the new material from safety and effectiveness, that would still likely lead to a 510(k)510(k)?

Rebecca Nipper: Again it just really depends on the specifics of the change and of the polymer and where you've used it previously, so I would encourage you to walk through the questions in the flow chart to see exactly where you would come out in your specific instance.

(David Thomas): Okay, thank you.

Coordinator: Our next question comes from (Gwen Payne), your line is open.

(Gwen Payne): Hello, I was wondering if there is a section of the guidance that defines effectiveness or how the FDA defines that, and a significant impact to effectiveness.

Rebecca Nipper: I think because we regulate a wide range of devices, that effectiveness is different depending on the product, and so I think the entire guidance kind of speaks to what could be – what could constitute a significant change -- that's kind of the intent of the entire context of the guidance is how to define significant in the context of your device and the thought process you would follow to come to that conclusion.

Irene Aihie: We'll take our next question.

Coordinator: The next question comes from (Betsy Sour), your line is open.

(Betsy Sour): Hello, thanks for taking the question. Thanks for all the work you put into these guidance documents and I think it's a really nice framework to work with.

I am having a little bit of a hard time squaring in the general guidance the text for question A3 about a change in warnings and precautions with some of the guiding principles, so the description about changes in warnings and precautions encourages the manufacturer to monitor device usage, make prompt revisions based on user experiences, and that one of the things that could prompt a new warning might be an adverse event that had been reported through the MDR process.

And then it immediately goes on to say submission of new 510(k)510(k) for such labeling changes are not generally required. And that seems to be a little bit at odds with the fact that that might also come with an intent to change safety and effectiveness based on field information so I would really appreciate to hear a little of your thinking about how those two things align with each other.

Rebecca Nipper: I think we'll need to get back to you on that question. Can you please send that question through our 510(k)510(k) staff or through DICE, and we will be able to answer that more thoroughly.

(Betsy Sour): Certainly, thank you.

Coordinator: Next question comes from (Alison Chan). Your line is open.

(Alison Chan): Hi, my question is more on the general guidance. If a modification was made to reduce risk and successful routine verification and validation activity confirmed that reduction in risk, would that still require a 510(k)?

Rebecca Nipper: I think it depends on the significance of the change, so the regulation says if it significantly affects safety or effectiveness, and so if you are looking to – if your intent is to reduce risk and significantly affect the safety or effectiveness of the device, then the new 510(k) is likely required. Otherwise you would need to work through whichever flow charts apply for your specific change and see if the risk-based assessment results in the need for a new 510(k) or not.

(Alison Chan): Thank you.

Coordinator: And our next question comes from (Carrie Plummer). Your line is open.

(Carrie Plummer): Hi, thanks, yes, I have a question related to safety and effectiveness. What if an organization initially determines that safety and effectiveness through the risk assessment process will not be affected and that verification and validation then shows the device continues to meet the originally defined specifications, but a significant improvement is observed in the performance of the device? Is a 510(k) needed in this case?

Rebecca Nipper: Because the regulatory threshold is whether or not the change significantly affects safety or effectiveness that change can be either for the positive or the negative, and therefore if you have determined that there is a significant impact on safety or effectiveness, then a new 510(k) is likely required.

(Carrie Plummer): Okay, and then a follow-up question, it's the same one that another caller had in FDA's position on what significant equivalents means. I am not able to find

clear direction or guidance within these documents on FDA's position on that or how to determine it.

Linda Ricci: So again we understand that the original language in K97 when we talked about significant change was not necessarily as clear as everyone would like, and these guidances were really intended to provide more clarity with regards to what significant impact means. Now we understand that every manufacturer and every device has different risk level perhaps and certainly different effectiveness level.

So while it might seem challenging that we don't provide a concrete example of significant with regards to you know, a specific number or percent change or something like that, we really wanted manufacturers to have the flexibility to use this guidance along with their own processes to make that determination about significant for their specific device.

So if you have questions about whether or not the specific change that you have in mind for your specific device would rise to the level of significant and you are having issues with applying the flow charts that we have provided in this guidance and you don't find any useful examples in either one of the guidances then I would recommend that you reach out to the 510(k) program or dice and we will certainly try and help you with your specific case.

(Carrie Plummer): Okay, thank you very much.

Coordinator: Our next question comes from (Jennifer) with Cipco Radiotherapy. Your line is open.

(Jennifer): Hi, thank you. Our question is in regards to a software change. Looking at example 2.1 from the software guidance, if we're making a change to a device

to restore it to the original specifications, but we want to push that change out to users in the field, that's effectively recalling the current version of the software, would the decision in that example still be documentation or would that require a new 510(k)?

Linda Ricci: So this guidance doesn't really talk about what would require a recall versus what would not. In this specific example we're talking about whether or not a new 510(k) would be required because it's changing back to the original specification. If there's a significant recall associated with an error that's in the field, it may need a recall and that is not determined by this guidance.

(Jennifer): So I may need to actually clarify, I'm not looking for a recall determination. We would – we're making a change to software to restore it to original specifications, that we would then recall the current version in the field, so would the recall itself trigger the 510(k), or we can say solely that it's intended to restore a system to original specifications?

Linda Ricci: So the other thing to look at as discussing question two is, is there a significant impact to the device? The language in question two was meant to allow manufacturers to make small changes to their device to return them to specifications, and particularly changes that don't have an impact to the safety or effectiveness of the device.

If you're looking at needing to recall all of your devices in the field then I would consider that you would need to think about whether or not you're having a significant impact to the safety or effectiveness of the device. I mean oftentimes there can be other reasons for doing recalls you know, and particularly not using – you know, if you wanted to update every item in the field that – and it may or may not reach the level of a recall.

But I would consider if the changes that you are making even though it's returning the device to its original specification, if that change is actually having a significant impact on the safety or effectiveness of the device, then question two would lead you down to go to question three.

(Jennifer): Okay, thank you.

Coordinator: Our next question comes from (Melissa Masters). Your line is open. (Melissa), we're unable to hear you in conference. Could you please check your mute button?

(Melissa Masters):Hi, this is for (Unintelligible).

Coordinator: Yes, your line is open.

(Melissa Masters):All right, thank you, thank you for taking my question. So the question I have is trying to think the flow chart with the guiding principles. If a change is not intended to improve or affect the safety and effectiveness of the device, is the flow that we then move onto the next stages, or is it initial risk based assessment have to be done even if the intent was not to change or modify the safety and effectiveness of the device?

Rebecca Nipper: If the intent was not to significantly affect the safety or effectiveness of the device, you would move on to the other sections of the guidance, and so the – when we – in the guiding principles when we talk about conducting an initial risk based assessment, that's meant to reflect the assessment they are making using either any combination of the sections within the guidance. So you know, whether it's the materials section or the labeling section or some combination, that would be your initial risk based assessment.

(Melissa Masters): Okay, great, thank you.

Coordinator: Next question comes from (Laurie Cartwright). Your line is open.

(Laurie Cartwright): Hi, thank you for taking my question. I have a question related to the software guidance and the changes being affected. If there was a recall related to a potential event and then the software was modified to reduce the likelihood of that event, would that be something that we would do under the changes being affected? I guess my main question is, is that something where we can implement that change to the field prior to 510(k) clearance?

Linda Ricci: Thank you for that question. It appears that that question specifically is going to be outside the scope of this guidance, and I would encourage you to contact the 510(k) program or the dice program to ask that question specifically.

(Laurie Cartwright): Okay, thank you.

Coordinator: Our next question comes from (Christina Merrick). Your line is open.

(Christina Merrick): Hello, my question has really more to deal with when do you apply the principles. If your change control process has determined the change is minor in nature, so like, something really minor like you're fixing formatting or other lesser changes to the product, is that process there significant enough that you don't have to move through and like do the full documentation process of is safety and effectiveness you know, even affected because the beginning change is so minor in nature?

Rebecca Nipper: I think even minor changes are within the scope of the guidance, but if you look in appendix B, I think you would see an example of where very minor changes can be handled with a minimal set of documentation.

(Christina Merrick): Thank you.

Coordinator: The next question comes from (Richard Lordo). Your line is open.

(Richard Lordo): Hello, thanks for taking my question. This pertains to labeling related changes. If you have a group of products that have been developed over time and all have their own individual 510(k) clearance numbers, yet they're all products that are the same intended use, same patient population.

If at some point you look to consolidate warnings and cautions for consistency in that patient population, along with your other risk management activities, is relying on the more recent 510(k) decisions an acceptable input to the decision-making process as one would assume it represents the agency's current thinking and current agreement with your most recent products being submitted as a reason to come up with a good consolidated set and consistent set of warnings and cautions for users?

Rebecca Nipper: Let me make sure I understand your question. So are you saying that if you were looking to update a product set of labeling, you're asking if whatever the most recently cleared version of labeling is would be an appropriate baseline for deciding to make those changes?

(Richard Lordo): To support making the changes, not as the input to the decision, but as you go through it, you do your other risk management activities, but additionally indicating well that's been the most recently cleared language that you know, would reflect up to date standards, recognition, all those sorts of things across the product family where the indications for use are the same, the patient population's the same, all that sort of stuff.

Rebecca Nipper: Okay, I understand. So I think you would need to go back to whatever the most recently cleared 510(k) is for each product. If you can say that they're all within the same product family you may be able to make the case that the most recently cleared submission applies to all of them, but I would examine closely if there are differences between your most recently cleared submission and one that is further back in the product history that may have more outdated labeling and whether or not a new submission is needed for one of those older pieces of the family.

(Richard Lordo): Okay, thank you.

Coordinator: Our next question comes from (Jan). Your line is open.

(Jan): Hi, thank you for taking the question. Somebody mentioned that the guidance is in line with previous guidances, but what would be a reasonable time for the transition of these new guidelines?

Linda Ricci: So as was mentioned previously this guidance is now in final. We expect that this guidance represents that practice that has been underway in the industry for many years has – is a basically a clarification of the K97 that was active for a very long time. So this is a final guidance and this is the current guidance that FDA is acting upon.

(Jan): Yes and what does it mean in practice that we are – yes, if we would for example get a control that we will be not in line with the guidance since we haven't done this yet or...

Linda Ricci: We expect manufacturers to use this guidance from now going forward for changes that they make to their devices.

(Jan): But it should be applied to retrospective as well.

Rebecca Nipper: I think we're having difficulty understanding your question a little bit, so if you could send your question to the 510(k) program or to dice, I think we can better help you answer your question.

(Jan): Okay.

Coordinator: Our next question comes from (Dau-Jan Huang). Your line is open.

(Dau-Jan Huang): Hi, thank you for taking my call. This question is related to the software modification guidance, and the section mentioned common software type change, the OS change, operating system change mentioned both in the infrastructure and the architecture. This is just getting confirmation that for the employees, the software change, changing from a Windows say XP to Windows 10, that's incremental update.

We determined it won't significant – make significant impact or changing the safety of that (unintelligible) a 510(k) is not required, but on the contract if it's to do with the nature of the operating system, if we are changing from Windows to Mac OS, then it's highly likely a 510(k) will apply. I just would like FDA input on how to determine if it's to do with infrastructure or it's to do with the architecture.

Linda Ricci: Sure, so changes to OS can be complicated, certainly. There are a number of software applications that use significant portions of the OS, such that a change to a different OS even if it's in the same family could have a significant impact on safety and effectiveness. So there could be situations in which going from XP to Windows 10 actually would require a 510(k).

This should come out in your risk analysis or in your thinking through you know, how you're using the various parts of the operating system. However there are also many situations in which the application really rides on top of the OS and the changes to the OS would not have a significant impact and can be easily mitigated using the existing risk control measures that are already in place.

In those cases then I would agree with you that the change to the OS would not likely require a 510(k). It's harder to make that argument when changing drastically from one OS family to another as you have indicated, like going from Microsoft OS to a Apple OS for example, but really it's important to look at what your application is using with regards to the OS and the underlying drivers associated with that OS to make the determination on if you're having a significant impact as a result of the change. Does that make sense?

(Dau-Jan Huang): Yes, this is very helpful. Thank you.

Coordinator: Our next question comes from (Abby McCurdy), your line is open.

(Abby McCurdy): Hi, this question is on behalf of Ward surgical and Beverley related to change in core algorithms, so if we were to make minor changes to the core algorithm, maybe just changing numbers or some minor changes to the parameters without significantly affecting the performance spec, what would be a part or maybe improving the performance spec, what would be a part around the impact on the 510(k) filing?

Like would we need to file a new 510(k), and also wanted to get your thought process around how to document like changes in effectiveness, like we understand safety from item 4971, but the risk assessment, the concept that's

been introduced, what are FDA's thoughts on how do we document those types of that there is no change in performance or impact on performance that is significant? Thank you.

Linda Ricci: So when you're looking at core algorithms and one of the reasons that we wanted to put it in that common software change types is exactly for the reasons that you have indicated. It is not uncommon to have an algorithm that's implemented in software to be tweaked over time. Certainly there can be small changes that are made that do not have a significant impact on the performance of the device.

And that is the reason that we identified them in the common software change types and not specifically in the flow chart as having a yes or no answer. Certainly there are aspects of core algorithm changes that could have an impact on either safety or effectiveness depending on the change that it's made and the clinical implication of that change.

Certainly if you're looking at changing things such as the specifications, or excuse me, the sensitivity or specificity of your algorithm such that a different decision would be made than was originally provided in the original 510(k), then I think you would need to look more closely at how that different decision would impact either the safety or effectiveness.

So in thinking about core algorithms, it's not just that you're making coding changes to the core algorithm or tweaking the performance characteristics, but it's rather what is the impact of those performance characteristics on the safety and effectiveness of the device as a whole.

(Abby McCurdy): That's very helpful, thank you, and also wanted to get your thoughts on documenting changes in performance or effectiveness just in general from the general guidance document as well.

Rebecca Nipper: I think if you look in Appendix B we've given some examples of how you would document whether or not a new submission is necessary, including whether or not there are changes to the effectiveness, and so I would encourage you to look in Appendix B and see if that is helpful.

(Abby McCurdy): Okay, thank you.

Coordinator: The next question comes from (Jody Sing), your line is open.

(Jody Sing): Hi, thank you for taking my question. My question is in regard to, the guidance says to assess the cumulative effect of changes and compare it with the recently cleared 510(k) and with the changed device. Could you share some thought on assessing the cumulative effect, and also I have an additional follow-up to this. If you can share, what does FDA expect when the guidance mentions comparison with the recently cleared 510(k) and the modified device where this is not a substantial equivalence change, but a comparison of the change, so what's the expectation there?

Rebecca Nipper: So what we're trying to say is that – so say you had device A that was originally cleared in your 510(k), and then you made changes in versions B and C that did not require submission of a 510(k) and now you have version D that you're assessing as to whether or not a new submission is needed. So when you look at version D of the device, you want to compare that device as it stands back to the original device and look at where the device is now including all of the changes that have taken place over time.

And so that's what we mean when we say that you would assess the cumulative effectiveness changes, even if individually they did not require a submission. Did you have another question?

(Jody Sing): And my follow up question was about comparison for example the guidance says consider including a tabular form of comparison between the 510(k) and the modified device, but this is not necessarily a substantial equivalent comparison, so what is FDA looking at, what kind of comparison should be included if a table is included?

Linda Ricci: When we're looking at listing of the changes that have been made since the original 510(k), that's really what we're looking at. We just want to know what changes have been made. It certainly makes it easier for FDA to understand the transition that this device has gone through since its last clearance.

Now we're not looking at that list of changes purely in a substantial equivalence determination, although when it's part of a 510(k) we will use that information and the supporting documentation along for those changes in our assessment of substantial equivalence. So really we're just looking for you to document the list of changes that you have made to your device since its last clearance. Does that help?

(Jody Sing): Yes, definitely. One more thing I wanted to clarify, the list of changes may not necessarily be the same that were listed in the previously cleared 510(k), they may be totally different, but because these are minor changes that may not require a 510(k). So you're just looking at the change between the previous one and the current one, not necessarily what we listed during the substantial equivalence.

Linda Ricci: That's right, it's going back to Rebecca's example where you have version A of a device, and that's the one that was cleared, and then you make versions B and version C, neither of which required a new 510(k), and then you go to version D and when you're assessing version D and you're comparing it to version A, you determine that you need a new 510(k).

We would expect you to provide the information on versions B and C in your submission for version D. Now if you went onto version E and version E also required a new 510(k) because version D had a 510(k) we would not expect you to list versions B and C for E.

(Jody Sing): Thank you. That's very helpful.

Coordinator: Our next question comes from (Laura Cosferowitz). Your line is open.

(Laura Cosferowitz): Hello, thank you for taking my question. I too would like to say thank you to the agency for the time and effort to develop this new guidance. I do have a question, not yet asked, although similar to the last question, the 510(k) guidance addresses individual changes implemented at a single point in time, but it does not discuss the incremental non-significant changes that could in some be significant when evaluating an established device.

So the 510(k) to bring FDA up to date on non-significant changes implemented since the last 510(k) clearance is often referred to by industry as a catch-up 510(k), and a 510(k) that is a catch-up is not explicitly described in the guidance, so with the new guidance is the agency in essence encouraging industry to use catch-up 510(k)s as a more common practice, or what does the agency anticipate in regard to product changes that had previously been documented internally such as you know, in a letter to file?

Rebecca Nipper: So I don't think our policy or expectations have changed in comparison to the K97 guidance or we didn't intend for them to change. We do know that sometimes manufacturers choose to submit a catch-up 510(k), we are familiar with that, but really this guidance doesn't speak to those. It only speaks to changes or deciding when a 510(k) is required for a change to a device.

And so if a catch-up 510(k) is submitted, that includes a number of changes that have occurred since the previous clearance, which were not necessary for submission, if there was no triggering change that required the need for a 510(k), then those – that catch-up 510(k) or the concept is kind of outside the scope of this guidance.

(Laura Cosferowitz): Yes, I realize that it's outside of the scope. I realize that it wasn't discussed. Is it going to be discussed in – or you know, in another guidance or...

Rebecca Nipper: No, I don't think our expectations or our policy around that – the practice of a catch-up 510(k). I don't think that has changed, so I don't think we really have anything to add in comparison to where we were previously.

(Laura Cosferowitz): Okay, so the agency doesn't anticipate that this is – that the new guidance is going to cause industry to need to do this more.

Rebecca Nipper: No, we don't think it will change anything in that regard.

(Laura Cosferowitz): Okay, thank you.

Coordinator: The next question comes from (Mark McCarty). Your line is open.

(Mark McCarty): Hi, thanks for taking this question. As probably everybody at FDA knows, ISO is looking at a re-write of 14971, which obviously affects a lot more guidances and so on and so forth than just these two.

Is there any expectation on FDA's part that the final re-write of 14971 would require that FDA revisit the guidances in which 14971 is cited, or should it be a situation in which a device may simply take the new 14971 whenever it comes out and bolt it into their operations and the citations of 14971 in FDA guidances are general enough that they shouldn't require a new 510(k), require a new FDA guidance to accommodate those changes.

Linda Ricci: Certainly there's a number of cross-cutting standards for which we could describe this practice, 14971 is definitely one of them, and while this doesn't apply specifically to the mods guidance that we're here talking about today, we do participate and actively talk about standards both within our guidances and in our practices and policies.

And look to make sure that our guidances are you know, as we referenced those standards are consistent, so whether or not a guidance, a specific guidance would need to change would depend on what the changes to any specific standard were and how it was referenced in the guidance.

Rebecca Nipper: Yes, and that being said, because of the way we reference ISO 14971 in the modifications guidance and this guidance specifically, I think the concept would still apply. We just referenced it because it's a document with which manufacturers are familiar, and so when we were talking about a risk based assessment it provided some terminology that manufacturers were familiar with.

(Mark McCarty): Okay, are you – is there any movement afoot for ISO to you know, move a little bit more towards you know, common terminology with FDA, or is everybody pretty much set in their ways and there's no perceived need for the terminology used by FDA and the terminology used by ISO to be aligned in any way shape or form.

Linda Ricci: Yes, that's a whole other conversation. So – and I am sorry that that is beyond what we need to talk about today for this guidance.

(Mark McCarty): Okay, thank you very much.

Coordinator: Next question comes from (Melissa Clamriss), your line is open.

(Melissa Clamriss): Hello, thanks for taking my call. My question has to do with the general guidance and material changes, so I'm on flow chart C, and in particular the C3 questions, and the definition around tissue. I'm wondering if that – the definition for tissue aligns with ISO 10993. When I read the example associated with C3, it seems to perhaps go beyond the tissue and otherwise being sterile parts of the body and may include intact skin. Could you clarify that definition, please.

Rebecca Nipper: I think – I don't think our intent was to redefine the terminology of tissue in comparison to ISO 10993, but I think generally when we refer to tissue, we refer to it more generally as far as not just internal sterile parts of the body, but also intact skin.

(Melissa Clamriss): Okay, thank you for the clarification.

Coordinator: Thank you, and our last question comes from (Judy Perrins), your line is open.

(Judy Perrins): Hi, thank you for taking my questions. I have two questions. The first is regarding manufacturing changes. Since manufacture has many manufacturing changes, and I realize the guidance document talks about the new two guidance documents that not specifically address manufacturing changes, and however I would like to have FDA's guidance on the need – especially for those manufacturing changes that does not impact the labeling or engineering or technology, or material aspect. So what is FDA's expectation for manufacture to use the flow chart to assess those changes and what is expectation on the documentation?

Rebecca Nipper: With a few exceptions that we do mention in the guidance, manufacturing review is outside the scope of a 510(k) review, and therefore manufacturing changes are also outside the scope of this guidance.

(Judy Perrins): Okay, so that means that if manufacture can document those manufacturing changes with the existing quality systems, documentation requirement that should be sufficient, not required to go to use involve flow chart to assess for a 510(k) or not too far, or (unintelligible) too far, correct?

Rebecca Nipper: If it is strictly a manufacturing change, it is likely outside the scope of this guidance. If the manufacturing change causes you to change some other part of your device such as the labeling, or the device specifications, then you would likely be – you would need to use this guidance to assess your changes.

(Judy Perrins): Okay, thank you. So my second question is regarding accumulative changes from last 510(k) clearance. So since we may have some changes between 510(k) submission to the 510(k) clearance, that window, several month window manufacturer also make some changes, so that these accumulated changes the window means the classic 510(k) submission, not classic 510(k) clearance.

Rebecca Nipper: So are you saying you would have two 510(k)s in house at the same time?

(Judy Perrins): No. For an existing 510(k) we had already a market and we are making modifications to that device for example if we make submission in April of this year and this device is cleared in September or October of this year, they may have some changes happening between that time window, so next note too far, what if the time (unintelligible) for the accumulated changes? Is that our submission of 510(k) of April of this year or since the clearance of 510(k) in September or October of this year?

Linda Ricci: We're talking about cumulative changes when we talk about the most recently cleared 510(k), we're not talking about a date, we're talking about a version of the device. So the version of the device that you submitted in April is the version of the device that would be under review and in your example was cleared in September.

So the version that you are changing between April and September is not the version that you submitted in April. So we're talking about the version of the device and not the time that the device was cleared. Does that make sense?

(Judy Perrins): So the version should be in October of that device.

Linda Ricci: No, the version would be the version that you submitted in your 510(k).

(Judy Perrins): Okay, that should be in April.

Linda Ricci: It's the version that was submitted in your 510(k), and then that was cleared, that's the version that was cleared, so any changes made between April and September were not part of your 510(k) under review.

(Judy Perrins): Yes, okay. Thank you.

Coordinator: Thank you, that was our last question so I will turn it over to Irene for closing remarks.

Irene Aihie: Thank you. This is Irene Aihie. We appreciate your participation and thoughtful questions. Today's presentation and transcript will be made available on the PDRH learn Web page at [www.fda.gov/training/pdrhlearn](http://www.fda.gov/training/pdrhlearn) by Wednesday, November 29th. If you have additional questions about today's presentation please use the contact information provided at the end of the slide presentation.

As always we appreciate your feedback. Following the conclusion of the Webinar, please complete a short 13-question survey about your FDA CDRH Webinar experience. The survey can be found at [www.fda.gov/pdrhwebinar](http://www.fda.gov/pdrhwebinar) immediately following the conclusion of today's live Webinar. Again, thank you for participating. This concludes today's Webinar.

Coordinator: Thank you. That concludes today's conference. Thank you for participating. You may disconnect at this time.

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