



VISIBLE PATIENT

Visible Patient Planning iOS User documentation



VISIBLE PATIENT **PLANNING iOS**

Version: 2.3.9

June 2022

Unique device identifier (UDI)

+B373VPPI0/\$\$72.3.9X



Software instructions for use (in English and other available languages) can be downloaded at <https://www.visiblepatient.com/en/go/planning-ios/2.3.9/user-manual>. Hard copy of instructions for use can be requested at contact@visiblepatient.com at no additional cost and delivered to the customer within 7 calendar days.

Indications for use

Visible Patient Planning iOS is intended as a medical imaging system that allows the review, analysis, communication, and interchange of both adult and pediatric medical data. It is also intended as software for preoperative surgical planning, postoperative control and as software for the intraoperative display of the aforementioned medical data.

This product is not intended for use with or for the primary diagnostic interpretation of mammography images.

The software includes basic tools to manage medical data, including 3D visualization, reading of medical documents, measurements, secured transferring, storing, etc.

It also includes advanced tools to visualize and analyze organ segments which are an approximation of vascular/airway territories for liver, lungs and kidneys.

The software is designed to be used by trained professionals (including physicians, surgeons and technicians) and is intended to assist the clinician who is solely responsible for making all final patient management decisions.



Prescription use only

CAUTION:

Federal law restricts this device to sale by or on the order of a physician.

Authorizations



Visible Patient Planning iOS is a medical device software which is **CE marked**. It can therefore be used in clinical routine and/or for patient care in member states of the European Union where national regulations are respected (complete list of countries available here: <https://www.visiblepatient.com/en/go/planning-ios/2.3.9/countries>).

Use of this software is not allowed in countries not mentioned in the list above.

In these countries, the software is considered as a prototype software and thus its use is restricted to communication with the patient, demonstration, research, or educational purposes. Any other use is strictly prohibited, particularly clinical use for diagnostic interpretation or treatment planning on human beings.

First date of CE marking: 2020



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1 Indications for use

1.1 General

Visible Patient Planning iOS is intended as a medical imaging system that allows the review, analysis, communication, and interchange of both adult and pediatric medical data. It is also intended as software for preoperative surgical planning, postoperative control and as software for the intraoperative display of the aforementioned medical data.

This product is not intended for use with or for the primary diagnostic interpretation of mammography images.

The software includes basic tools to manage medical data, including 3D visualization, reading of medical documents, measurements, secured transferring, storing, etc.

It also includes advanced tools to visualize and analyze organ segments which are an approximation of vascular/airway territories for liver, lungs and kidneys.

The software is designed to be used by trained professionals (including physicians, surgeons and technicians) and is intended to assist the clinician who is solely responsible for making all final patient management decisions.

1.2 Intended patient population

Visible Patient Planning iOS 2.3.9 can be used regardless of the patient's age.

- Newborn (from birth to 28 days)
- Infant (from 29 days to 2 years of age)
- Child (from 2 years to 12 years of age)
- Adolescent (from 12 years to 18 years of age)
- Transitional Adolescent (from 18 years to 21 years of age)
- Adult (beyond 21 years of age)

1.3 Intended users

To use Visible Patient Planning iOS 2.3.9, users shall have some knowledge in:

- Human anatomy and pathology
- Medical and technical language

The software is intended to assist the physician who is solely responsible for making all final patient management decisions.

The patient is not the user of Visible Patient Planning iOS 2.3.9.

2 Contraindication

This product is not intended for use with or for the primary diagnosis interpretation of Mammography images (MG).

3 Intended performances and claims

3.1 Clinical performances

Visible Patient Planning iOS 2.3.9 does not claim any clinical performance.

3.2 Safety claims

Visible Patient Planning iOS 2.3.9 is a stand-alone application. There is no clinical risk identified for neither the user nor the patient. Thus, there are no expected undesirable side-effects in the use of VP Planning iOS.

However, some indirect adverse device effects have been identified and could occur:

1. Minor injuries to patients because of longer operating time or unnecessary incisions during surgery due to wrong interpretation of the patient model.
 - a. Model transparency may cause approximate rendering of the 3D model, resulting in errors in the patient model interpretation.
 - b. Model transparency and nested structures may cause difficulties to understand the relative positions of anatomical structures, resulting in errors in the patient model interpretation.
 - c. Model transparency, nested structures and selected segments may cause difficulties to understand the relative positions of anatomical structures, resulting in errors in the patient model interpretation.
 - d. Electronic Health Record (EHR) revision update mechanism may cause difficulties to retrieve the latest model revision, resulting in using a model with potential approximations, and thus resulting in errors in the patient model interpretation.
 - e. An attacker may find and exploit a software or an environment vulnerability to modify the medical records and alter medical information, resulting in errors in the patient model interpretation.
 - f. Software issues might occur, resulting in errors in the patient model interpretation.
2. Minor injuries to patients due to longer operating time or unnecessary incisions during surgery when the wrong patient (i.e. another patient) is analyzed.

- a. User might have difficulties to identify the patient or select the desired case resulting in patient confusion.
- b. An attacker may find and exploit a software or an environment vulnerability to modify the medical records and alter medical information, resulting in patient confusion.
- c. Software issues might occur, resulting in patient confusion.

3.3 Security claims

Protected Health Information (PHI) might be exposed with the use of this medical device.

Both the application and the user manual provide the security policy to users.

3.4 Technical performances

Visible Patient Planning iOS 2.3.9 allows the medical team to:

- Understand anatomical structure localizations,
- Analyze volumes of anatomical structures,
- Download and read medical reports,
- Compute volumes of interest regarding organ resection planning.

All functionalities of Visible Patient Planning iOS were tested during the test phase of the development. Each feature can be used for pediatric or adult patients.

In addition, a literature study and post-market assessment were conducted to support the device performance and intended use.

4 Cautions

4.1 General caution

Caution: the software is designed to be used by trained professionals (including physicians, surgeons and technicians) and is intended to assist the clinician who is solely responsible for making all final patient management decisions.

Never use VP Planning iOS without the advice of a trained health professional.

Any serious incident in relation to the device should be reported to Visible Patient and the local Competent Authority.

4.2 Caution about secure IT environment

Caution: Visible Patient demands that the application is installed on a secure device, complying with the rules and regulations of your country.

Never use VP Planning iOS on a device that does not comply with the security policy provided with the application. Failure to comply with security measures may lead to a malfunction of the device, loss of data (medical or personal), damage to their integrity, or

exposure to security threats from the computer network. **This can therefore cause minor harm to the patient.**

4.3 Caution about access to patient data

Caution: recovering, updating and accessing medical data is done manually by the user. Always make sure you have the latest revision of a case before accessing medical data. Also make sure to consult the data corresponding to the desired patients.

Never use data that has not been updated or that does not correspond to your patient. Such use may cause minor harm to the patient such as increased surgery duration or useless incisions in tissues during surgery because of incorrect information.

4.4 Caution about the display of 3D patient data

Caution: rendering of transparent structures of a 3D model may evolve in case of update of the operating system or software problem.

Always make sure you have an updated version of the application and the operating system. The use of obsolete software versions may cause minor harm to the patient such as increased surgery duration or useless incisions in tissues during surgery because of incorrect information

4.5 Caution about anatomical structure volume

In the VP Planning iOS application, the volume of anatomical structures is available here:

- in the manager of anatomical structures (or « Organ manager »)
- when selecting an anatomical structure via the selection tool (model series)
- when displaying volumes associated to clip applying simulation (clip series)

Caution: these volumes are computed from medical images from another medical device (e.g., Visible Patient Suite). Therefore, accuracy of volumes depends on native image quality (voxel size of the image).

For more information, please refer to the computation of vascular or respiratory territories (see 8.8.6).

4.6 Caution about vascular or respiratory territory computation

Caution: visualization of clip data and associated interactions allowing to simulate clip applying rely on the reconstruction of respiratory and vascular territories. These territories are computed with the medical device Visible Patient Suite from certain information visible in the medical image. Therefore, this territory reconstruction is an approximation of reality.

For more information, please refer to the computation of vascular or respiratory territories (see 8.8.6).

5 Technological characteristics

5.1 System requirements and characteristics

The VP Planning iOS application is designed to run on standard commercially available mobile devices (Apple iPhone or iPad) and through the installed operating system (iOS or iPadOS).

The application can run on Apple iOS and iPadOS devices meeting the following requirements:

- The app requires a device running Apple iOS 12.0/iPadOS 13.0 or later.
- At least 300 MB of storage shall be available.
- At least 2 GB of memory shall be available.
- Data connection is required to retrieve medical data from the data storage server.

5.2 Application overview

The VP Planning iOS application is composed of modules dedicated to management and analysis of medical data. It offers a flexible visualization solution to help trained health professionals (including physicians, surgeons and technicians) in assessing patient anatomy and pathology in order to plan therapy or surgery. This software provides tools allowing to display 3D models created by Visible Patient. These models can be displayed according to preferences of health professionals thanks to standard visualization options.

5.3 Application modules

The modules of the VP Planning iOS application can be clustered in four categories:

- Data management
- Data display
- Application configuration
- Help and regulatory information

Category	Functionality
Data management	Recovery and display of the list of cases
Data management	Previsualization of a case and series download
Data display	Visualization of a model series
Data display	Visualization of a clip series
Data display	Visualization of a PDF series

Application configuration	User account management
Application configuration	Application settings
Help and regulatory information	Regulatory information
Help and regulatory information	Help
Data management	Visible Patient links

5.3.1 Recovery and display of the list of cases

The aim of this module is to recover and display the list of cases. The list of cases is recovered from Visible Patient's secure servers. Cases are displayed in the form of cells containing patient identification information (name, identifier, group, date and icon). Cells contain also an icon showing the status of the case (new, open, available locally, updated, unavailable).

Triggering a synchronization makes it possible to recover the new cases and modifications available on the server. The date of the last synchronization is displayed at the top of the case view.

Filtering and sorting tools make locating and opening cases easier.

5.3.2 Previsualization of a case and series download

The aim of this module is to display information relating to a case (name, identifier, group, date, icon and summary). It also allows to download and access the various series.

5.3.3 Visualization of a model series

This module allows to display and interact with a model series. Implemented interactions include rotation, translation and zoom.

Various tools (selection, masking, focus) are available in order to interact with the model. It is also possible to change orientation, list anatomical structures, cancel or replay actions, change colors of the scene, disable interactions and make a screenshot of the scene.

A dedicated view listing the various interactions and available tools is accessible in the hamburger button of the view.

5.3.4 Visualization of a clip series

This module allows to display and interact with clip data. Implemented interactions are the same as in model data visualization.

Beside masking and focus tools which are common to model data visualization, the module includes a tool to simulate clip applying. By tapping a network section of the target organ, it is possible to display and select a simulation of the vascular or respiratory segments supplied by this section. It is possible to deselect a segment by tapping it.

A dedicated view allows to display simulated volumes of resected and remaining parts corresponding to the selection of anatomical segments.

The other tools allowing to control the scene are common to model data visualization.

5.3.5 Visualization of a PDF series

This module allows to display PDF data (modelling report) and to interact conventionally with it (scrolling and zoom).

5.3.6 User account management

This module allows to manage Visible Patient accounts registered in the application. It allows to register new accounts and to select an active account (account for which cases are displayed in the list of cases).

The module also allows to delete data associated to an account.

5.3.7 Application settings

This module allows to access and modify application settings. Moreover, it allows to access the application log and to delete downloaded data.

5.3.8 Regulatory information

This module allows to display all regulatory information (marking, contact, indications for use, approvals, security policy and information on Visible Patient).

5.3.9 Help

This module allows to display information relating to the instruction manual.

5.3.10 Visible Patient links

This module allows to open Visible Patient links within the application. There are two types of links:

- Links allowing to access a case
- Links allowing to facilitate account registration thanks to a prefilling system of the form.

6 Installation instructions

The VP Planning iOS application is installed via the [App Store](#) application available on iOS and iPadOS.

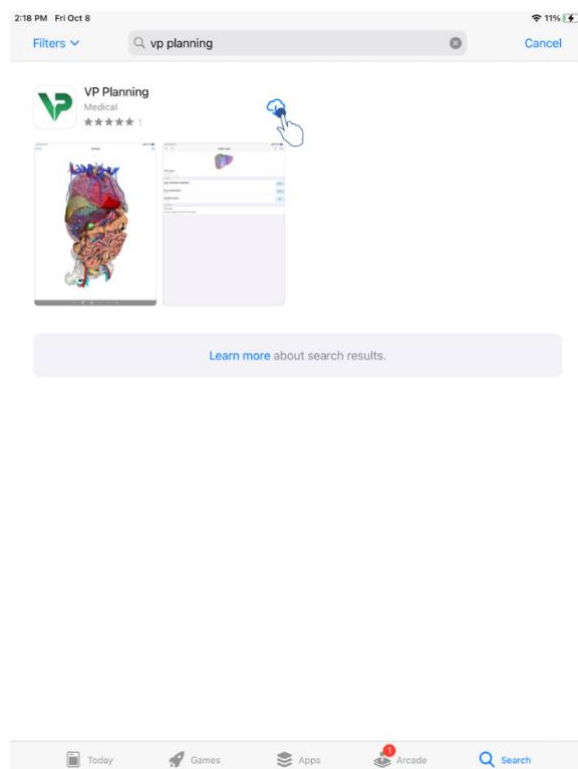


Figure 1: Searching for the application

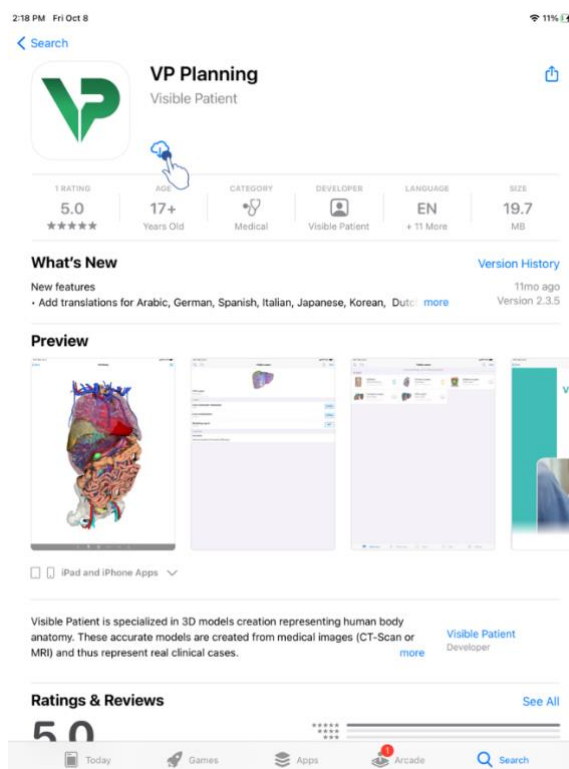


Figure 2: Application download

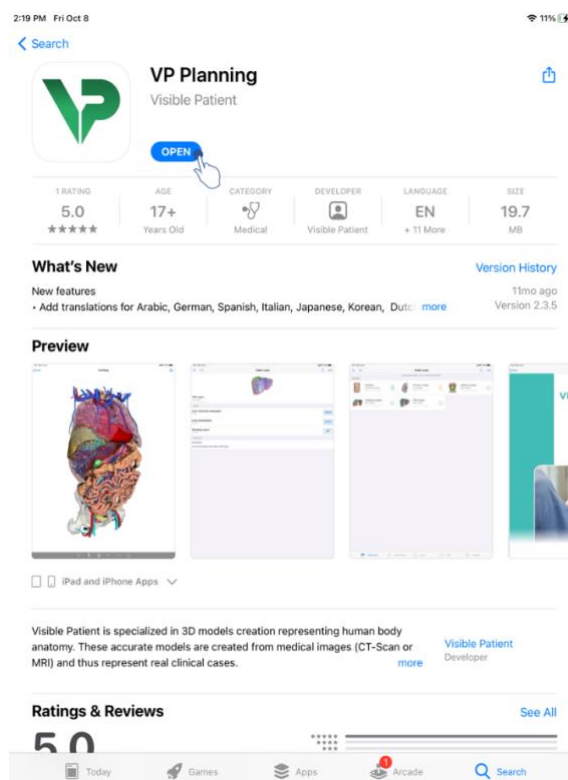


Figure 3: Open the application

Once the App Store application is open, search for the “VP Planning” application and open the application view (Figure 1). Then, tap the download icon (Figure 2) and wait for the application to be recovered. Once downloaded, tap the button

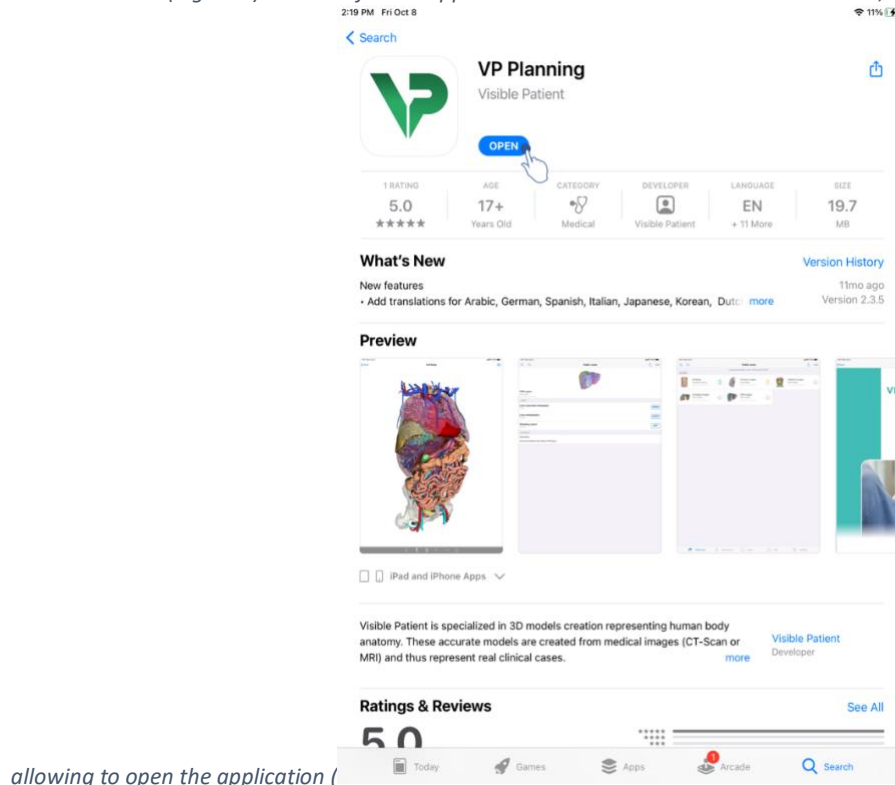


Figure 3: Open the application

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7 Security policy

Medical device security (software and/or hardware) is a shared responsibility between stakeholders, including health care facilities, patients, providers, and manufacturers of medical devices.

Failure to maintain security measures can result in compromised device functionality, loss of data (medical or personal), infringements of data integrity, exposure to security threats emerging from computing networks. **This in turn may result in minor injuries for the patient.**

Medical devices capable of connecting to another device, to the Internet or another network, are more vulnerable to cybersecurity threats than devices that are not connected.

Visible Patient software includes security functions to protect data access, data transfer and data storage. However, users should also put in place additional safeguards to secure the use of the device (the tablet or the smartphone) and to meet regulatory requirements.

Visible Patient advises its users to observe the following safety measures on their device:

- **Always secure your device with a password**

Limit access to devices through the strongest authentication of users provided by their device system.

- **Ensure that your device locks itself automatically**

Most devices allow you to set them to automatically lock themselves after a period of inactivity. Make sure you choose the shortest timeout you are comfortable with.

- **Encrypt your device**

Even if you have secured your smartphone with a password, a thief could still plug your device to a computer and gain access to all of your personal information. Using encryption on your smartphone can help prevent such data theft.

- **Only download apps from approved sources**

The Apple App Store takes security pretty seriously. They are very careful about what apps they make available and will withdraw apps that raise concerns after release. Make sure you check ratings and reviews if they are available, and read the app's privacy policy to see exactly what device features it will have access to if you download it.

- **Don't miss operating system update**

Updates to your OS often include system vulnerability patches, so it's important to install them.

- **Install security software**

Your device should be protected as a computing device. Look for a security app that includes malware prevention, remote data wipe, privacy review of apps and an automatic security advisor to alert you of potential risks when you change a device setting.

- **Remove unnecessary medical data**

Medical personal data must be stored on the device only the necessary time. Users should regularly delete medical data that are no longer used.

8 Instructions for use

8.1 How to register an existing Visible Patient account

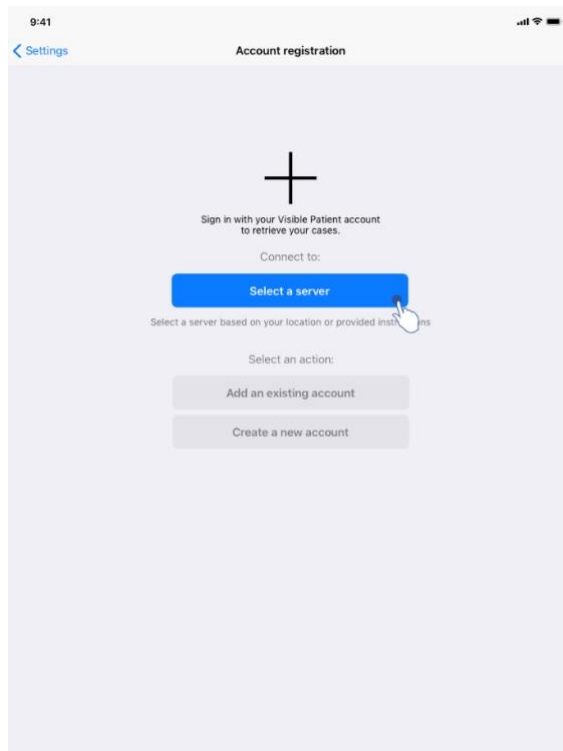


Figure 4: Add an account

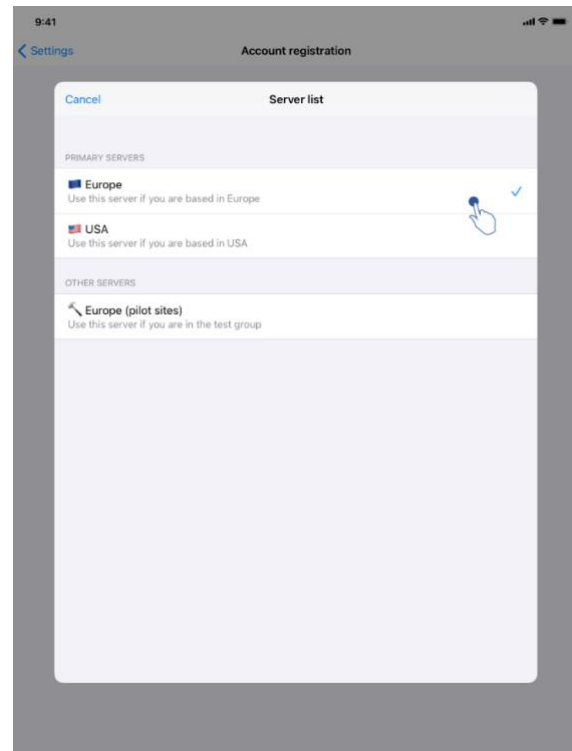


Figure 5: List of servers

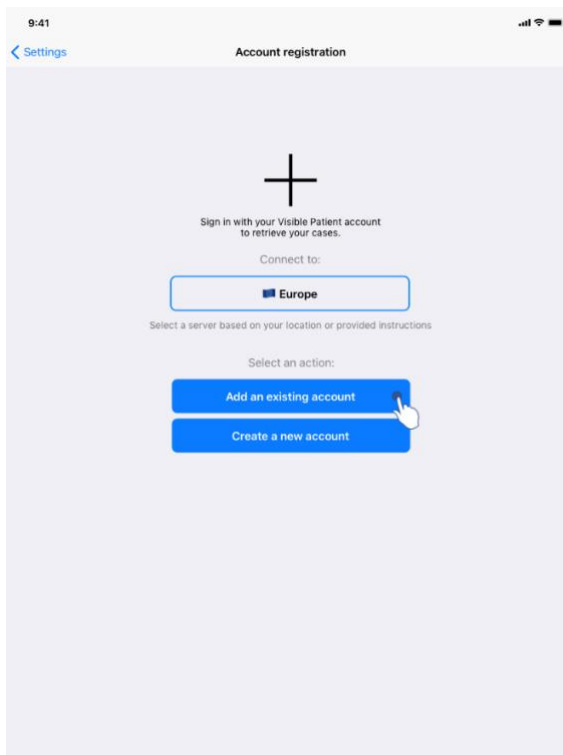


Figure 6: Account registration

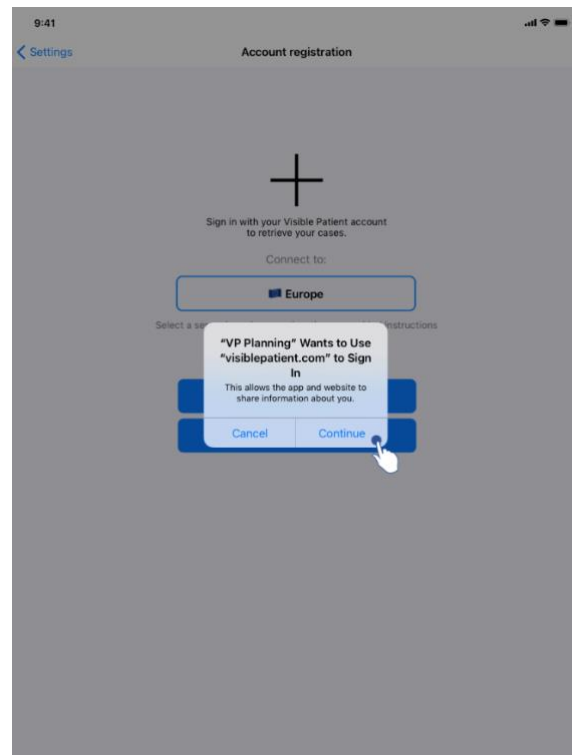


Figure 7: Information sharing with Visible Patient

To register an existing Visible Patient account within the application:

- If no account is registered in the application, go to the **Configuration** view via the **Account management** view.
- If an account is already registered in the application, got to the **Account selection** view via the **Configuration – Account management** views.

Once on the account registration view, tap the action allowing to select a server (Figure 4). This action will launch the display of the server list. Select the server associated with your account (Figure 5). Then, tap the existing account registration action (Figure 6) and allow the information sharing with Visible Patient (Figure 7) to display the authentication form.

8.2 How to create and register a new Visible Patient account

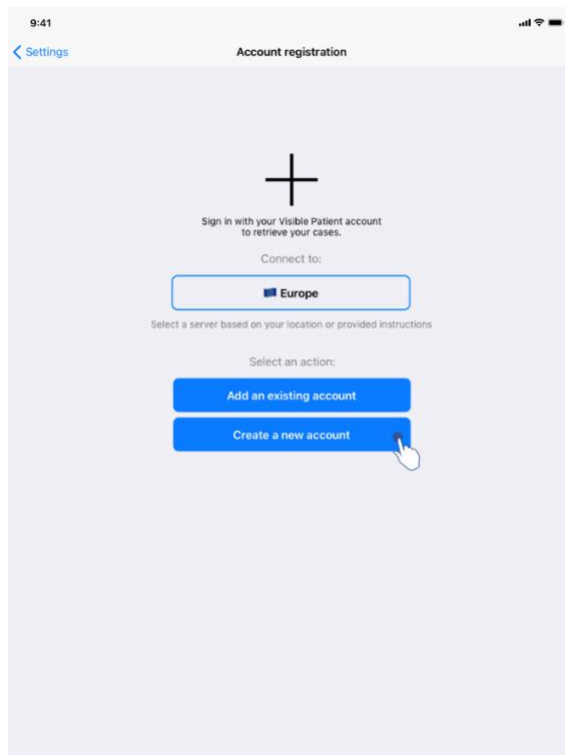


Figure 8: Account creation

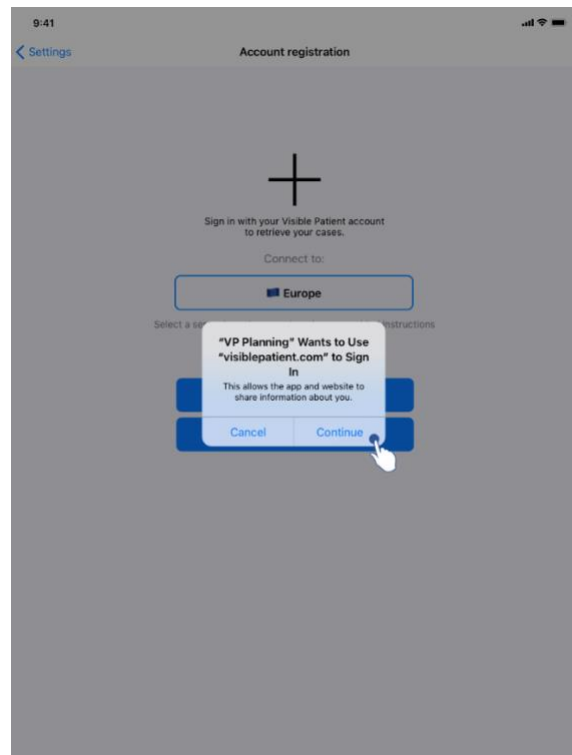


Figure 9: Information sharing with Visible Patient

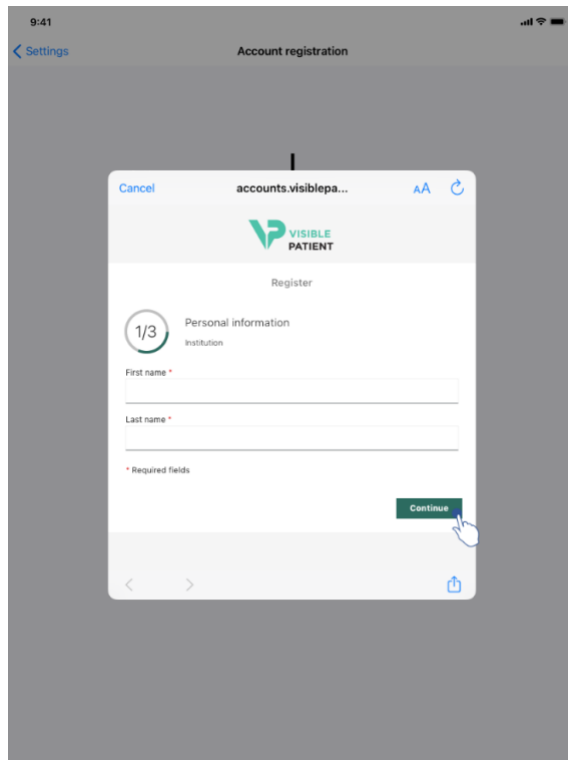


Figure 10: Account creation form

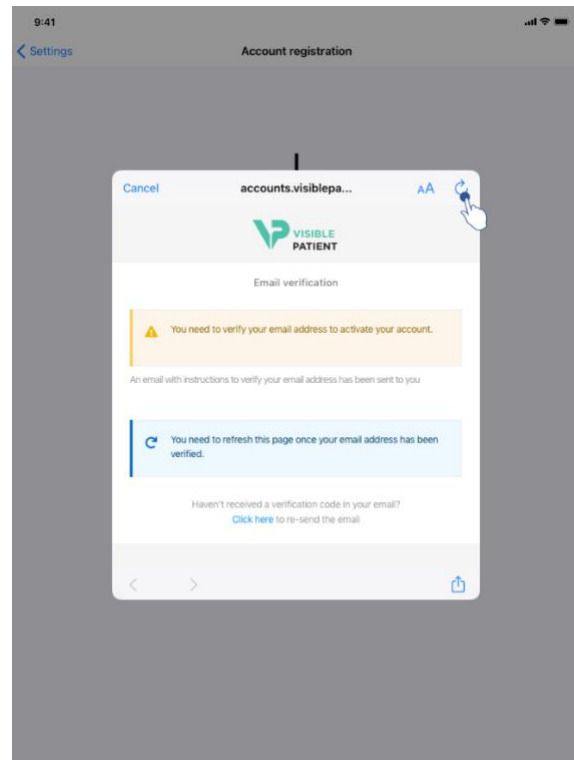


Figure 11: Refresh the view once the address has been validated

To create and register a new Visible Patient account within the application:

- If no account is registered in the application, go to the **Configuration** view via the **Account management** view.
- If an account is already registered in the application, go to the **Account selection** view via the **Configuration – Account management** views.

Once on the account registration view, tap the action allowing to select a server (Figure 4). This action will launch the display of the server list. Select the server on which you want to create an account (Figure 5). Then, tap the new account creation and registration action (Figure 8) and allow the information sharing with Visible Patient (Figure 9) to display the account creation form (Figure 10).

Important: once the account has been created and your email address verified, use the refresh button of the view to finalize the account creation process (Figure 11).

8.3 How to recover and display your list of cases

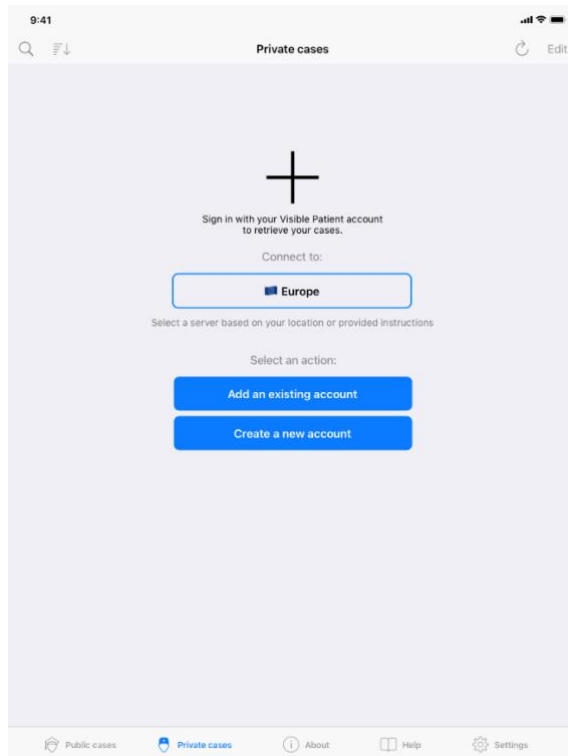


Figure 12: No registered account

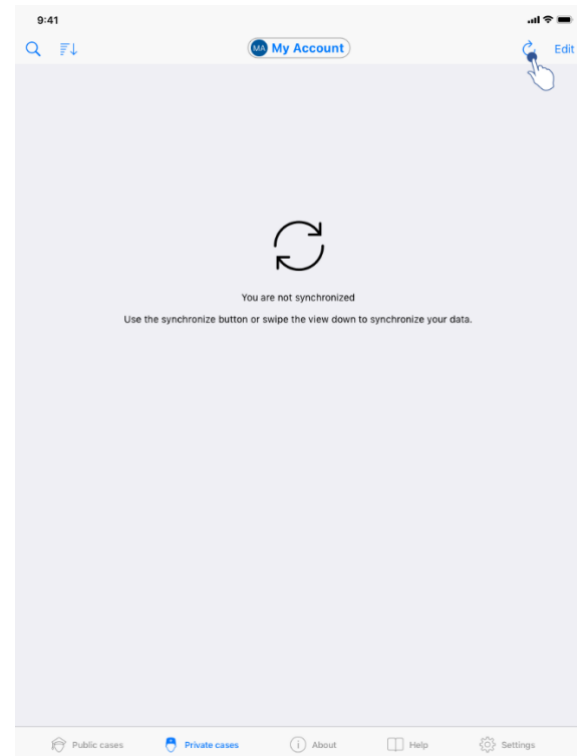


Figure 13: No synchronization

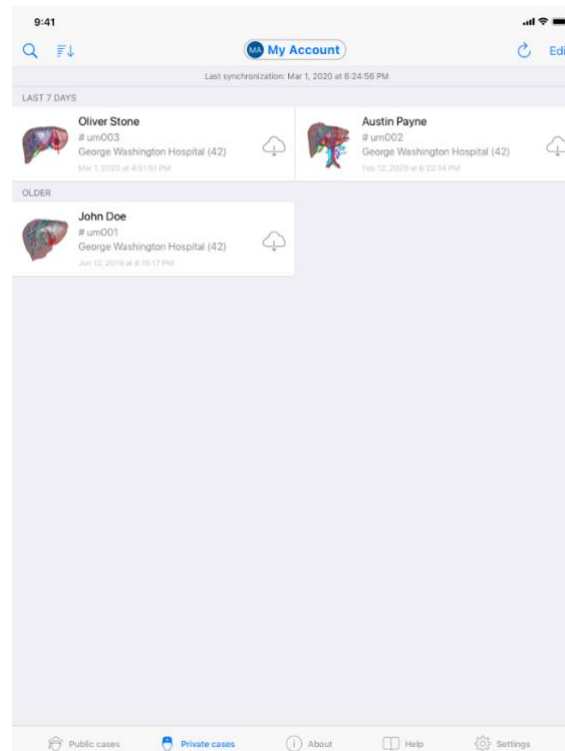


Figure 14: Synchronized view

To recover and display your list of cases, go to the **Private cases** view (Figure 12). After dismissing the introduction view explaining the purpose of the view, and registering your

account (see 8.1 or 8.2), the view is in a non-synchronized state (Figure 13). Execute a synchronization by using the dedicated button or dragging the view down. The updated list of cases is then displayed and the synchronization date is updated at the top of the view (Figure 14).

8.4 How to filter and sort your list of cases

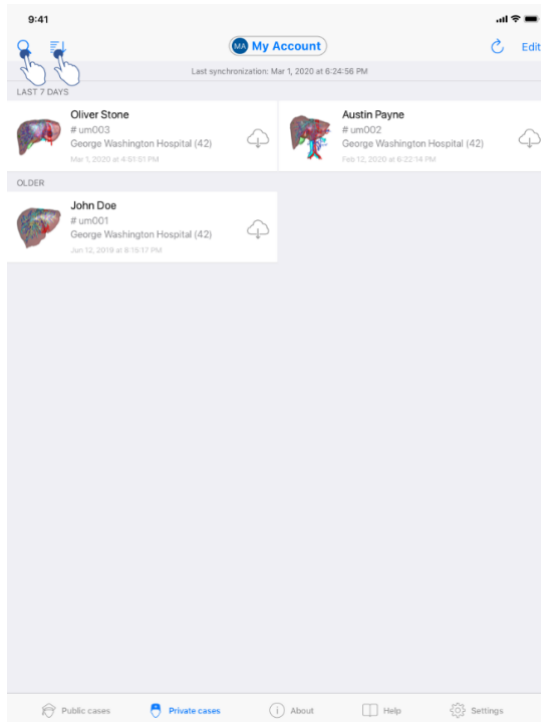


Figure 15: Filtering and sorting activation

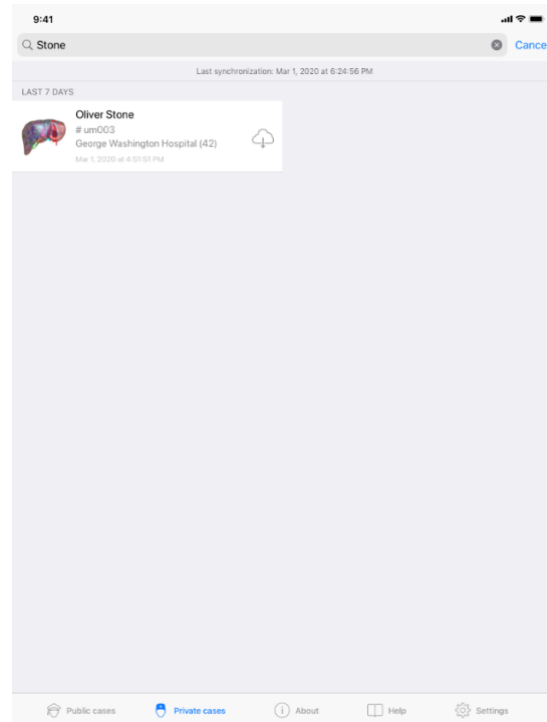


Figure 16: Filtering cases

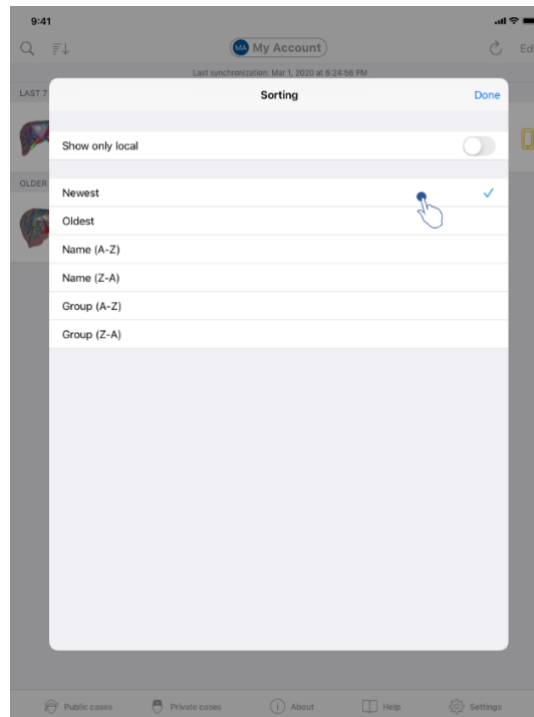


Figure 17: Sorting cases

To activate the filtering of cases, tap the filtering tool (magnifying glass) located at the top of the list of cases (Figure 15). A search field to apply a filter to the list of local cases is then displayed in the navigation bar (Figure 16).

To modify the sorting of cases, tap the sorting tool located at the top of the list of cases (Figure 15). The sorting selection view is then displayed. To modify the selected sorting, tap the sorting name you want to apply (Figure 17). An option allowing to list only cases containing downloaded series is also available at the top of the view.

8.5 How to access data of a case

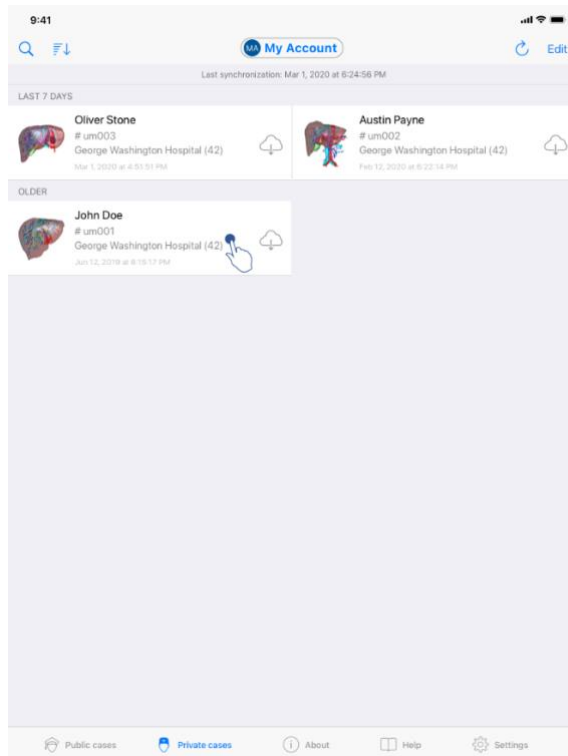


Figure 18: Case selection

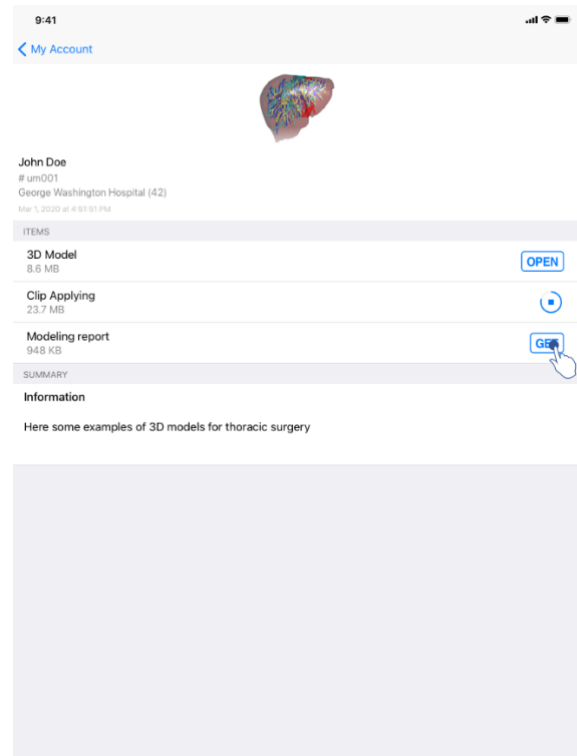


Figure 19: Series download

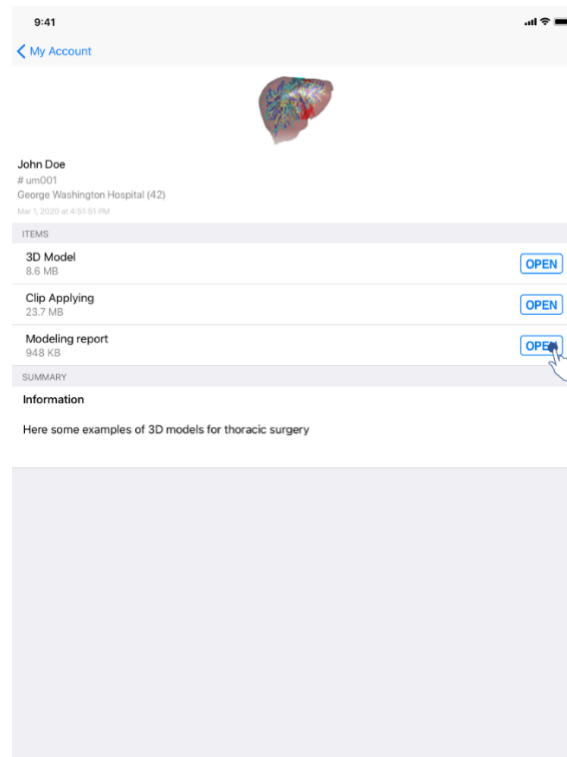


Figure 20: Opening a series

To access data of a case, select the desired case in the list of available cases (Figure 18). When on the previsualization view of the case (Figure 19), download the series by tapping

the **Get** button. Once the data has been downloaded, you can access it by tapping the **Open** button (Figure 20).

8.6 How to visualize a model series

8.6.1 Opening a model series

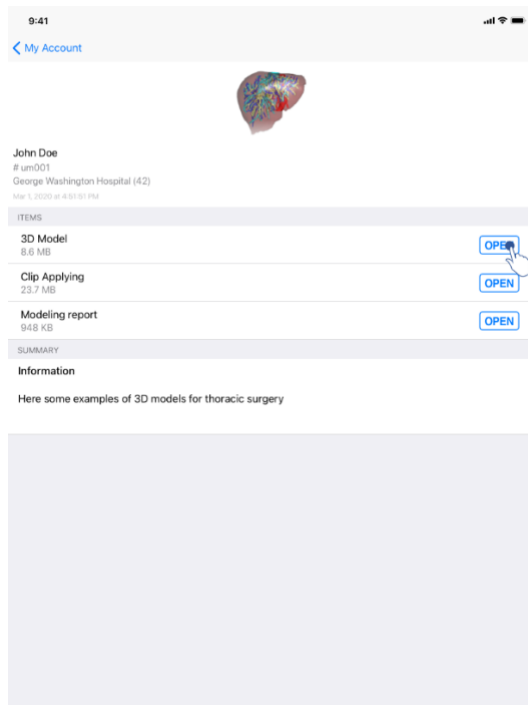


Figure 21: Opening a model series

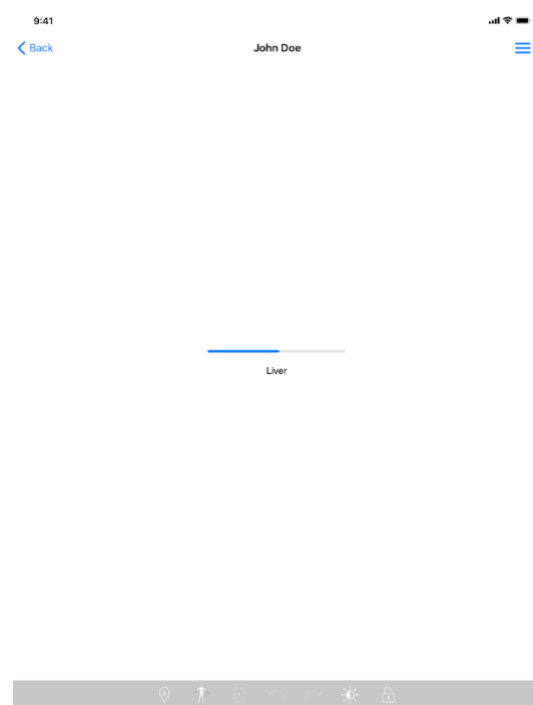


Figure 22: Loading of a model series

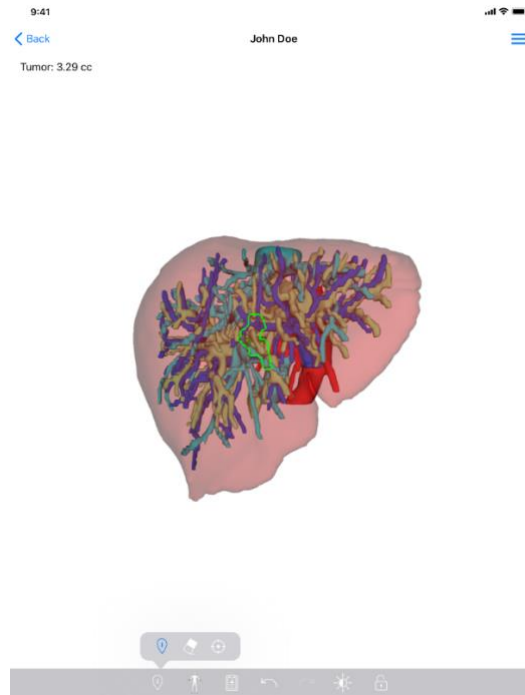






Figure 23: Display of a model series

When the data has been downloaded (see 8.5), tap the **Open** button corresponding to the model series (Figure 21). A progress bar allows to see the progress of data loading (Figure 22). When the data has been loaded, the 3D model is displayed (Figure 23).

8.6.2 Basic interactions

When the model series has been loaded, various basic interactions are available in order to interact with the model:

-  Drag one finger to rotate the model in 3D
-  Spread fingers to zoom in
-  Pinch fingers to zoom out
-  Rotate two fingers to rotate the model in 2D

8.6.3 Tools

The toolbar at the bottom of the view offers a set of actions. By tapping the selected tool (Figure 24), the list of available tools is displayed. By selecting the desired tool in that list, the selected tool becomes active. Interactions with the model are then expanded:

**Selection tool**

Use the selection tool to display information about this anatomical structure



Tap an anatomical structure to retrieve its name and volume



Tap the background of the view to unselect the anatomical structure

**Hiding tool**

Use the masking tool to modify opacity of an anatomical structure



Tap an anatomical structure to hide it



Double tap an anatomical structure to change its opacity

**Focusing tool**

Use the focusing tool to focus on a specific element in the scene



Tap an anatomical structure to focus on a point in the scene



Double tap an anatomical structure to focus on the structure

8.6.4 Other actions

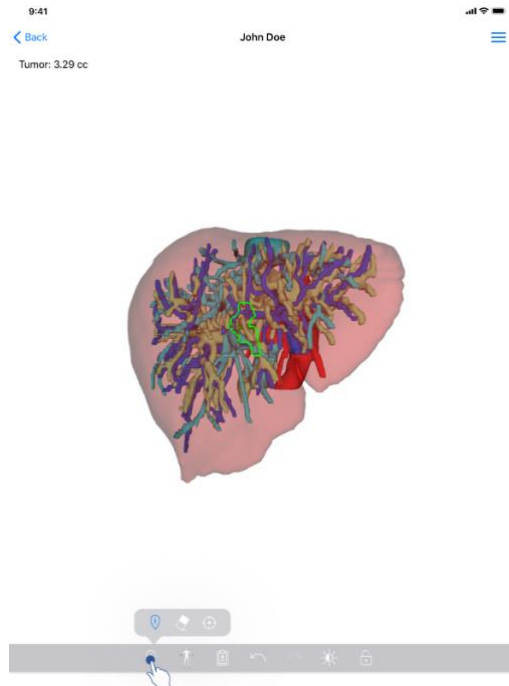


Figure 24: Selection of the visualization tool of the model



Figure 25: Selection of model orientation

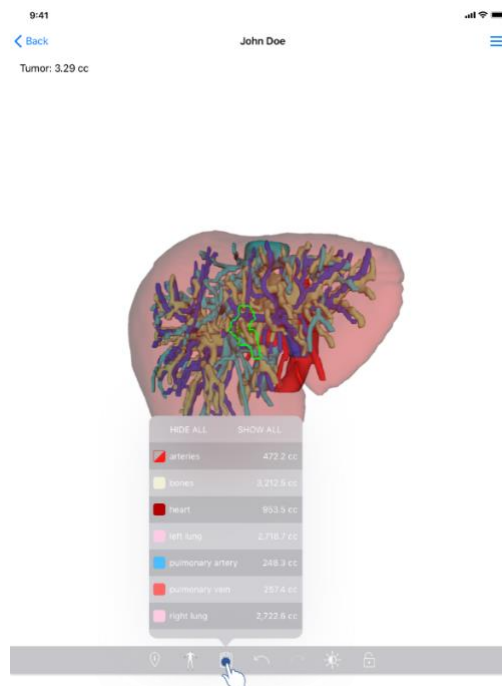


Figure 26: Display of anatomical structures of the model

By tapping the marker showing model orientation (Figure 25), it is possible to select in which orientation to display the model (axial, frontal or sagittal).

By tapping the structure management tool (Figure 26), the list of anatomical structures is displayed. This list includes names, colors, opacity, and volumes of structures displayed in

the scene. By tapping the name of a structure, its opacity is modified. Buttons allowing to display or mask the entire structures are also located at the top of the list.

Buttons (arrows) to cancel and restore an action are also available. The impacted actions only concern the selection and change of structure opacity.

The next button (contrast) allows to modify the background color of the scene.

The last button (padlock) freezes interactions with the scene.

Finally, the hamburger button located in the top right-hand corner of the view allows to make a screenshot of the scene and to display a tutorial containing the list of available interactions.

8.7 How to visualize a PDF series

8.7.1 Opening a PDF series

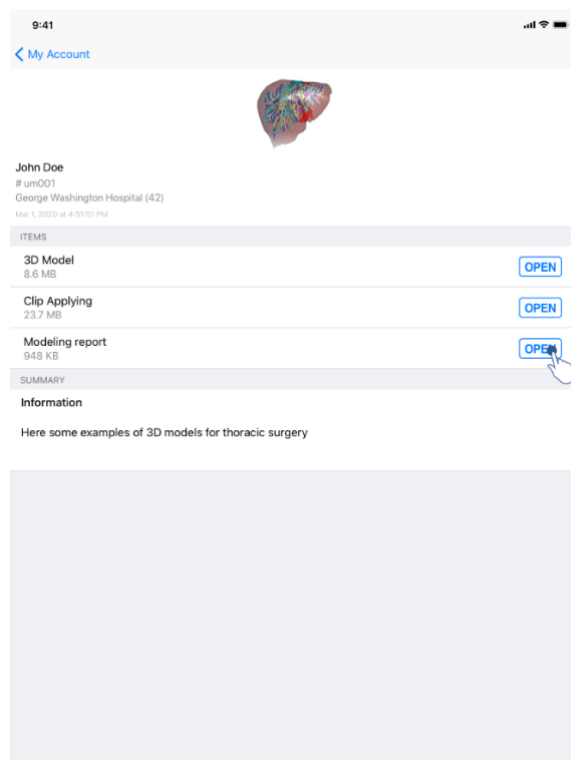


Figure 27: Opening of a PDF series



Figure 28: Display of a PDF series

When the data has been downloaded (see 8.5), tap the **Open** button corresponding to the PDF series (Figure 27). When the data has been downloaded, the PDF is displayed (Figure 28).

8.7.2 Basic interactions

It is possible to interact with PDF data as follows:

- Swipe vertically to scroll the document
- Spread or pinch two fingers to control the zoom of the document
- Swipe two fingers in the same direction to move the document

8.8 How to visualize a clip series

8.8.1 Opening a clip series

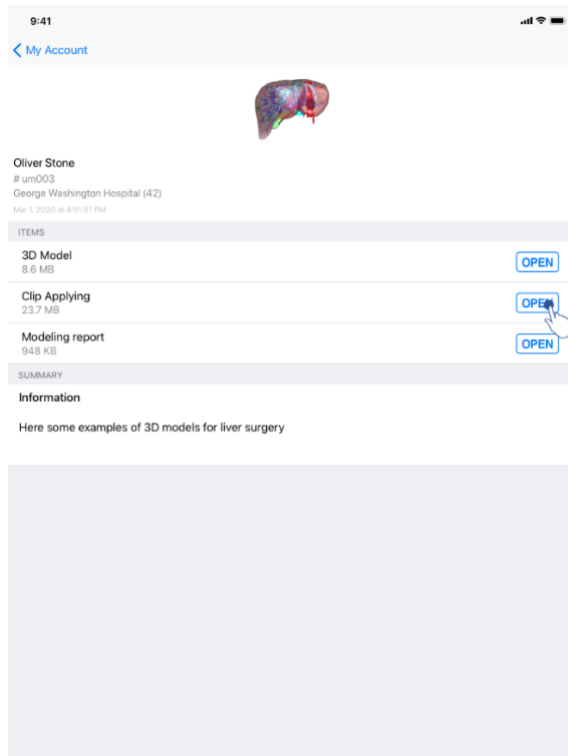


Figure 29: Opening clip data



Figure 30: Loading clip data

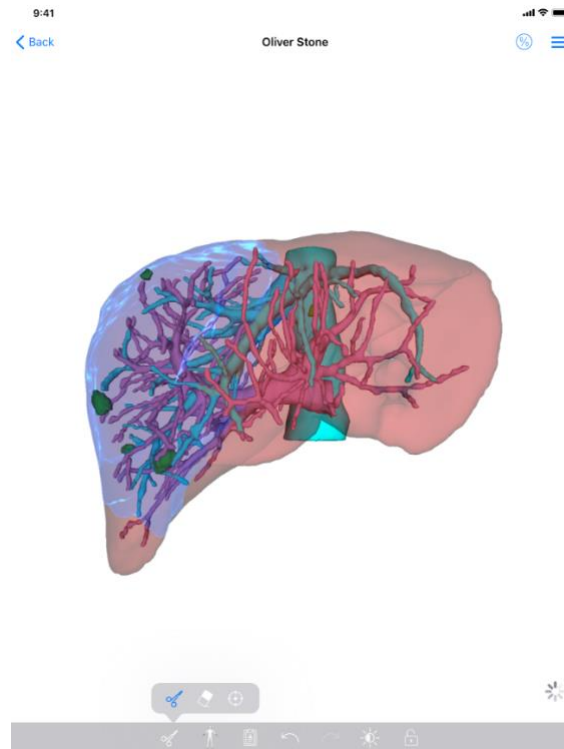


Figure 31: Displaying clip data

When the data has been downloaded (see 8.5), tap the **Open** button corresponding to the clip series (Figure 29). A progress bar allows to see the progress of data loading (Figure 30). When the data has been loaded, the 3D model is displayed (Figure 31).

8.8.2 Basic interactions

When the clip series has been loaded, the same basic interactions as for the model series are available (see 8.6.2).

8.8.3 Tools

Beside masking and focus tools (see 8.6.2), the clipping tool is available:



Clipping tool

Use the clipping tool to select resected segments



Tap the organ's network at a given point to select the associated segment



Tap a segment to deselect it



Hold the background of the scene to reset the segment selection

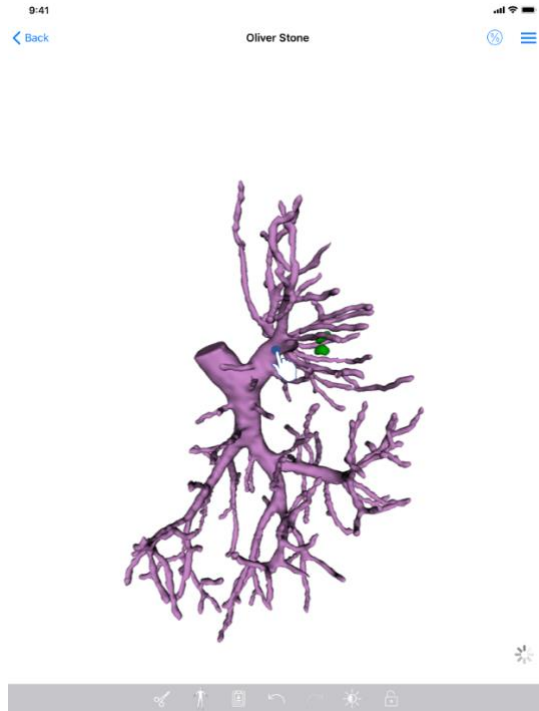


Figure 32: Segment selection

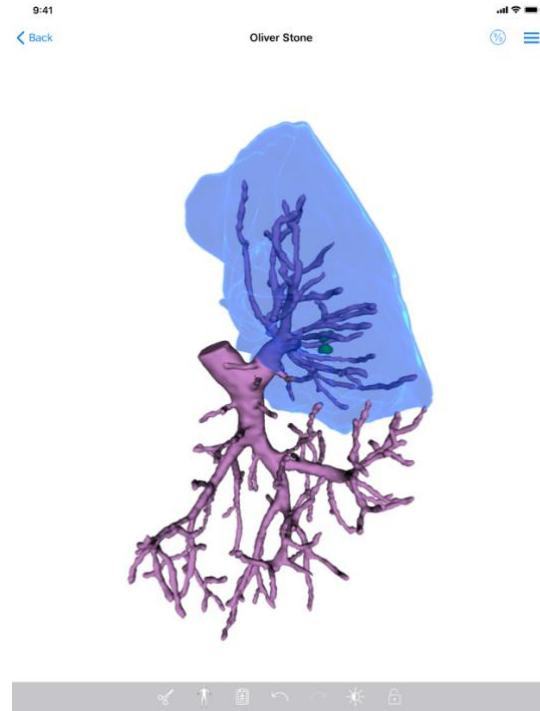


Figure 33: Display of the selected segment

Segment selection is done by tapping the network of the target organ where you want to apply a virtual clip (Figure 32). Vascular or respiratory territory corresponding to the selected section is then displayed (Figure 33). To deselect a segment, just tap on it. To reset the selection of segments, long press on the background of the scene.

8.8.4 Display of resection volumes

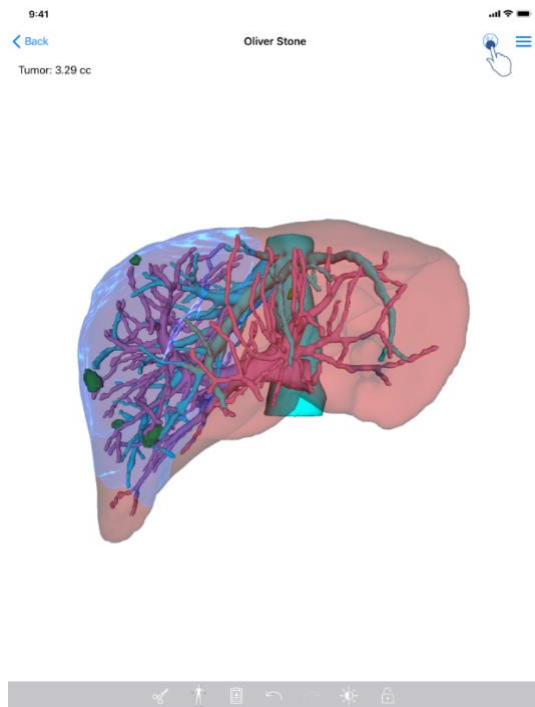


Figure 34: Display of a clip series

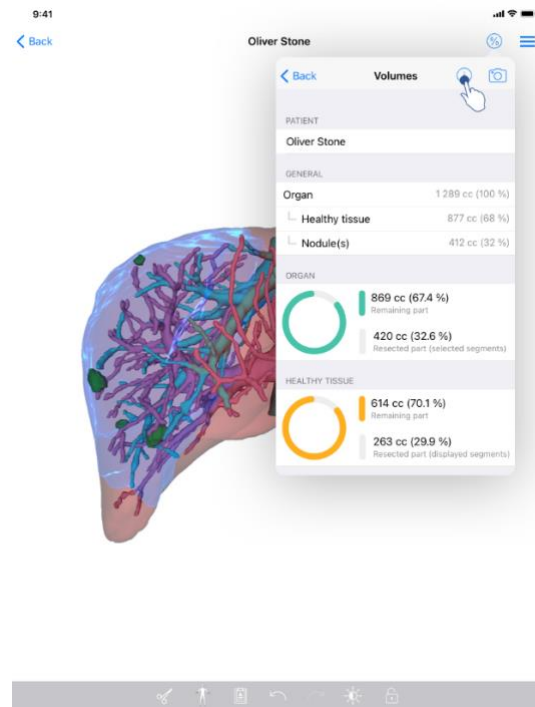


Figure 35: Display of volumes linked to clip data

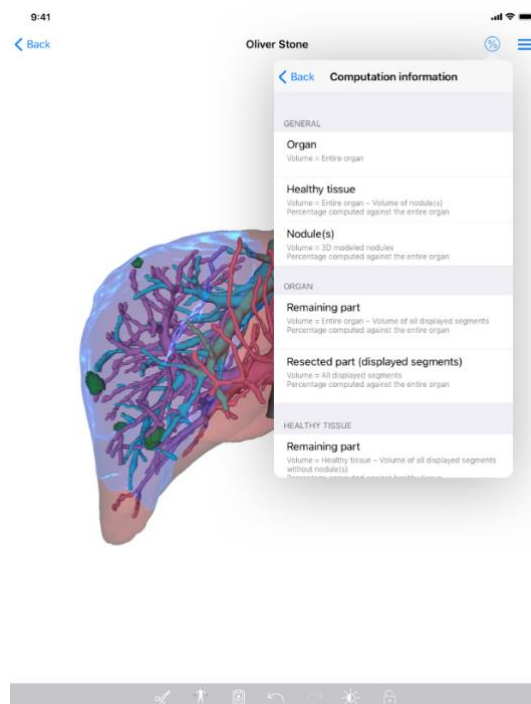


Figure 36: Display of volume computation of clip data

When segments have been selected for resection, the volume display icon (Figure 34) allows to display the view of volumes computed following resection simulation (Figure 35). Information on volume computation (Figure 36) is available by tapping the information button (Figure 35).

There is also a button to capture the volume view in the top right-hand corner of the view (Figure 35).

8.8.5 Resection volume computation

Volumes displayed in the General section are computed as follows:

- **Organ**
 - Volume = entire organ
- **Healthy tissue**
 - Volume = entire organ – Nodule volume
 - Percentage computed based on the entire organ
- **Nodule(s)**
 - Volume = Nodule(s) modelled in 3D
 - Percentage computed based on the entire organ

The volumes displayed in the **Organ** section are computed as follows:

- **Remaining part**
 - Volume = entire organ – Volume of all visible segments
 - Percentage computed based on the entire organ
- **Resected part (visible segments)**
 - Volume = All visible segments
 - Percentage computed based on the entire organ

The volumes displayed in the Healthy tissue section are computed as follows:

- **Remaining part**
 - Volume = Healthy tissue – Volume of all visible segments without Nodule(s)
 - Percentage computed based on healthy tissues
- **Resected part (visible segments)**
 - Volume = All visible segments inside the Nodule(s)
 - Percentage computed based on healthy tissues

8.8.6 Estimate of vascular or respiratory territories

The computation of vascular or respiratory territories (corresponding to displayed segments) and their associated volume is done upstream by the medical device: Visible Patient Suite. The VP Planning iOS application uses the estimate of volume territories to compute the remaining and resected parts volume of an organ (see 8.8.5).

Vascular or respiratory territories proposed within clip data are an approximation of real patient anatomy. The method used in the medical device Visible Patient Suite to estimate these territories relies on organ vascularization or respiratory system of the organ and the accuracy of the method directly depends on segmentation quality of the tree. Territory estimate stems from following process.

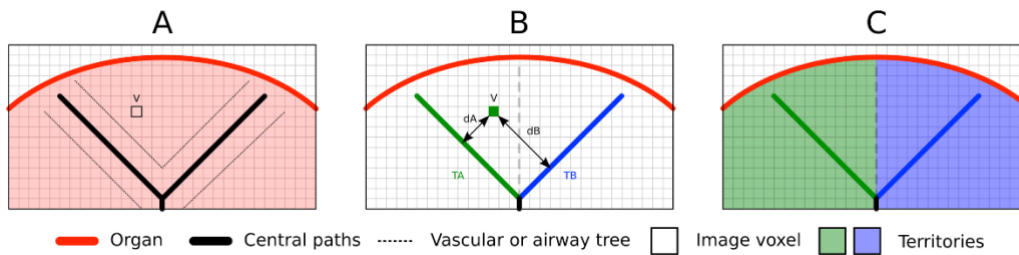


Figure 37: Territory identification process

First, segmentation of the vascular or respiratory system is used to compute central tubular paths (A). Then, these central paths, which represent the tubular structure, are labelled by trained health professionals in order to associate each path to the territory of an organ. For each voxel of the targeted anatomical structure, the method then finds the closest central path and associates the same organ territory (B). Finally, the result of the labelled image is meshed to obtain all territory estimates.

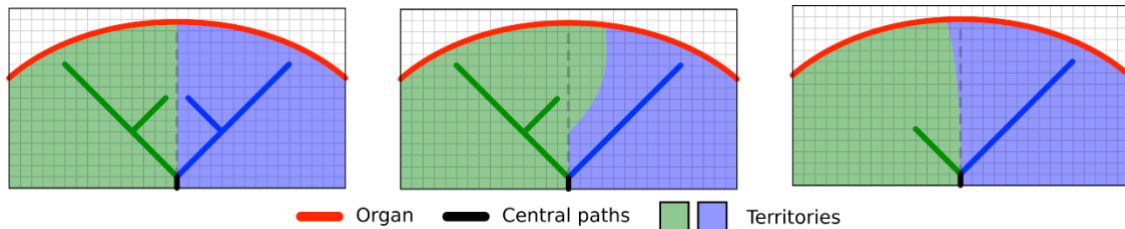


Figure 38: Territory variation depending on central paths of the target organ

Accuracy of the method directly depends on segmentation quality of the vascular or respiratory system. Image resolution, contrast agent diffusion in the vascular system of the organ during image acquisition, etc. can have an impact on territory estimate.

8.8.7 Other actions

The same actions as for visualization of a model series are also available (see 8.6.4).

8.9 How to update a case

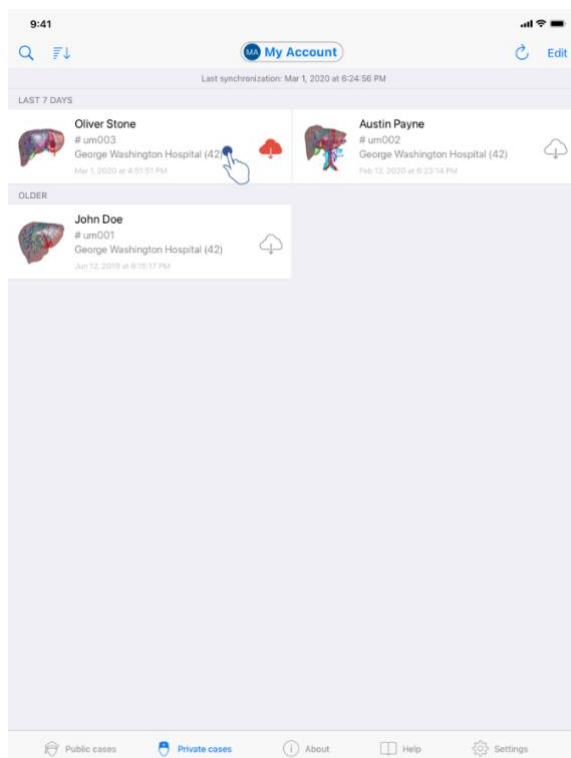


Figure 39: Icon of a case proposing an update

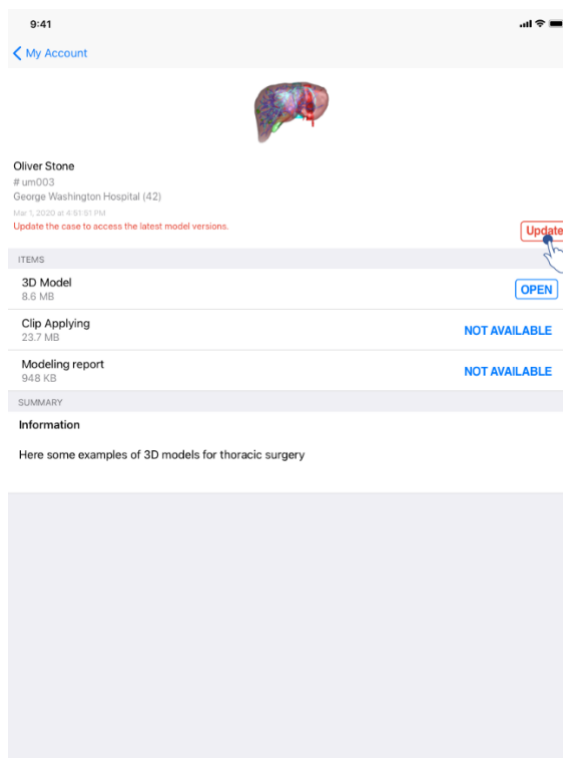


Figure 40: Update of a case

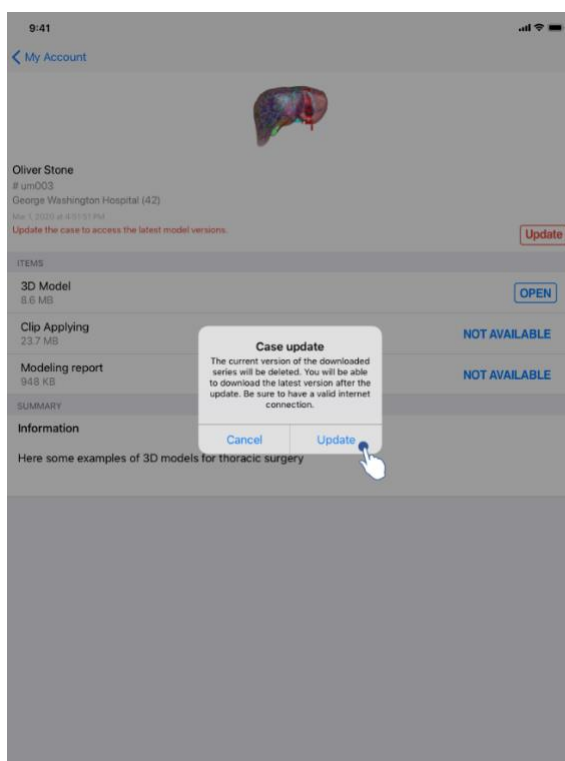


Figure 41: Validation of the update

Cases containing no downloaded series are automatically updated upon synchronization. For cases proposing an update and containing series downloaded on a previous revision, the

status icon is updated (Figure 39). In order to update the case, you have to tap the **update** button (Figure 40). When the action has been validated (Figure 41), the case is updated.

Important: updating a case deletes the series downloaded on the previous revision of the case.

8.10 How to delete downloaded series

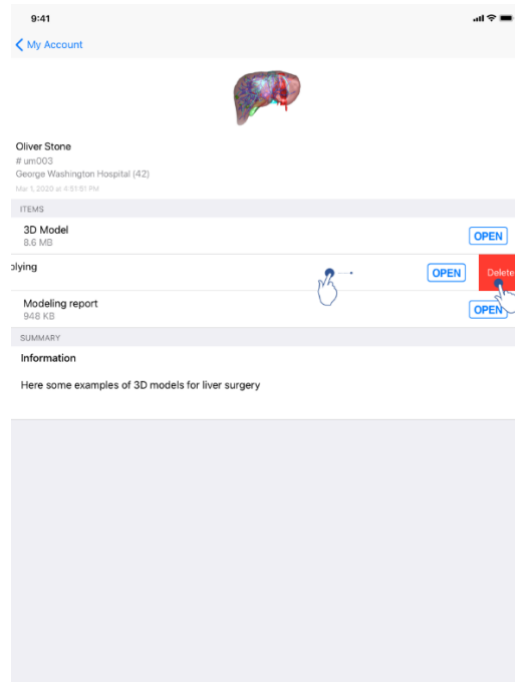


Figure 42: Deleting a downloaded series

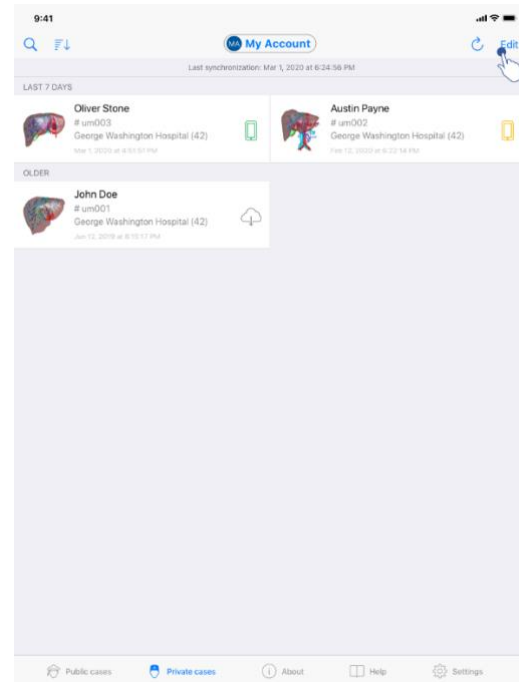


Figure 43: Activating selection mode of cases

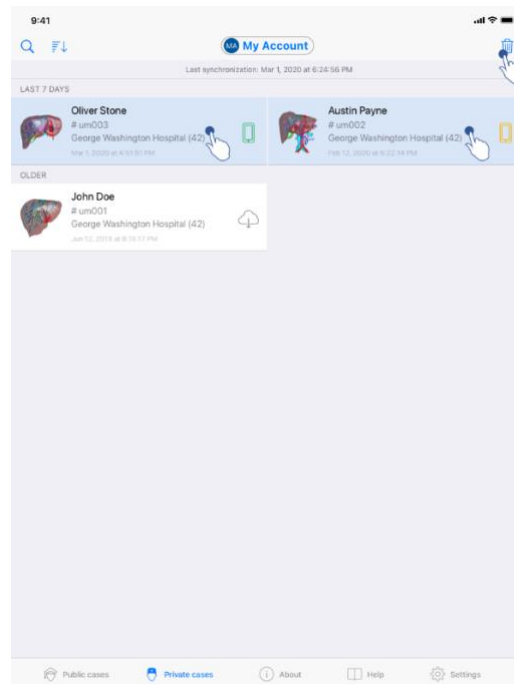


Figure 44: Selecting and deleting downloaded cases

In order to delete downloaded series, several options are possible.

First, it is possible to delete a downloaded series by dragging the data presentation cell towards the left (Figure 42). You then just have to tap the **delete** action on the right of the cell.

The second option allowing to delete downloaded series consists in activating the edit mode of the list of cases (Figure 43). When activated, select cases of which you want to delete series and validate deletion with the button in the top right-hand corner of the view (Figure 44).

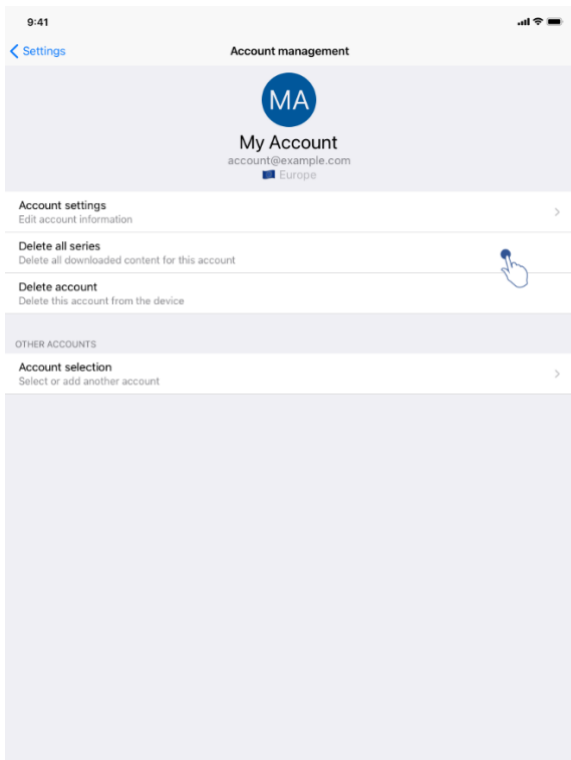


Figure 45: Deletion of downloaded series from the account management view

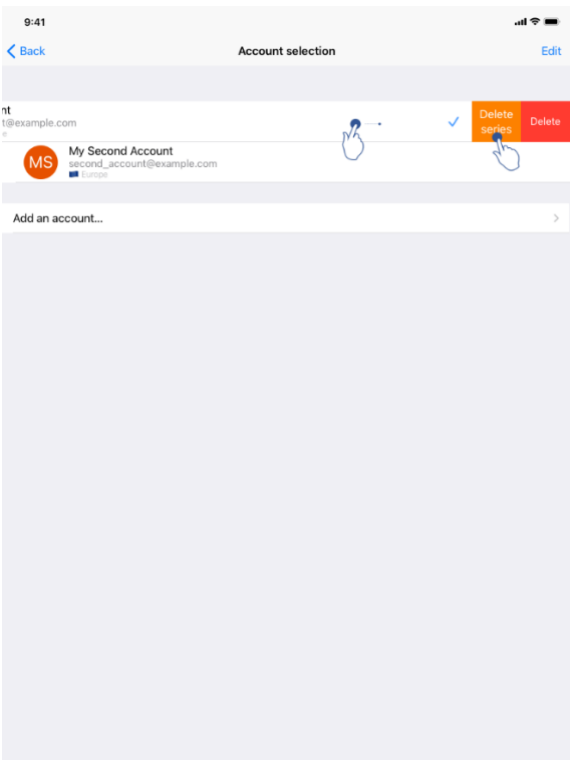


Figure 46: Deletion of downloaded series from the account selection view

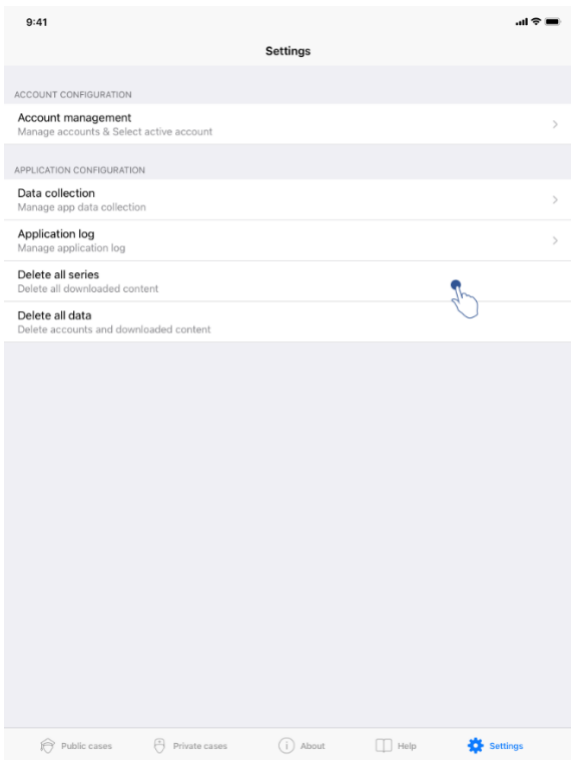


Figure 47: Deletion of all downloaded series

It is also possible to delete all series linked to an account. To do so, go to the account management view and tap the corresponding action (Figure 45). It is possible to perform this action from the account selection view as well by dragging the account presentation cell towards the left (Figure 46). You then just have to tap the **delete series** action and confirm deletion when the confirmation message is displayed.

Finally, it is possible to delete all the downloaded series. To do so, tap **delete all series** action located in the application settings (**Error! Reference source not found.**).

8.11 How to delete registered accounts

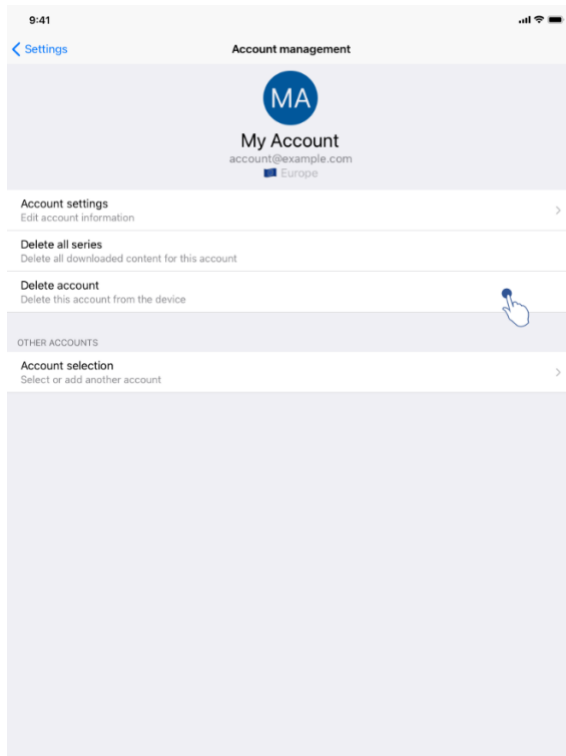


Figure 48: Deletion of an account from the account management view

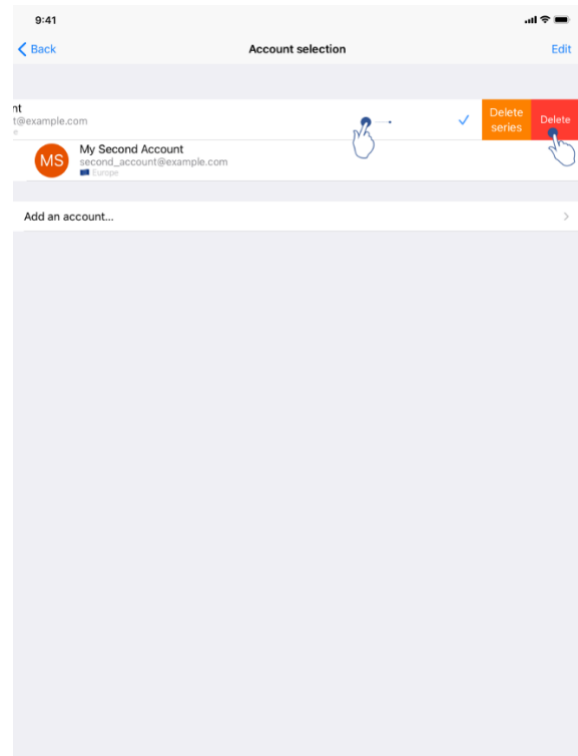


Figure 49: Deletion of an account from the account selection view

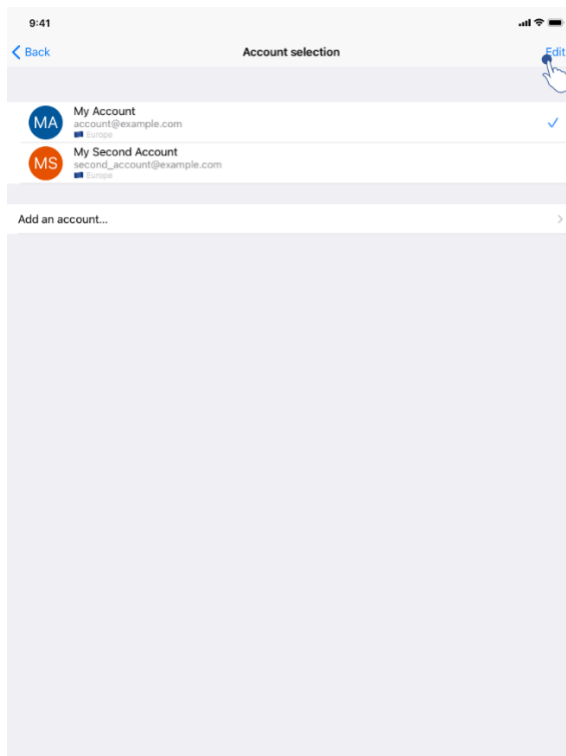


Figure 50: Activation of the account edition mode

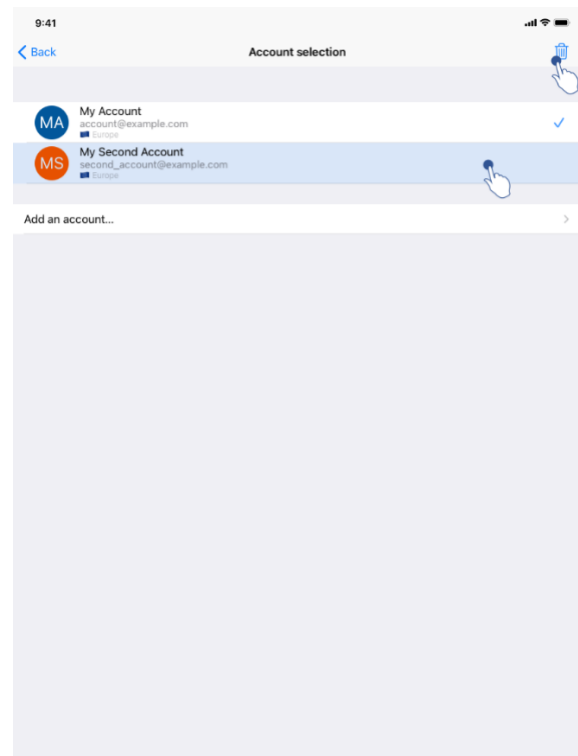


Figure 51: Selection and deletion of accounts

There are various methods to delete an account.

First, a single account can be deleted through the account management view by tapping the corresponding action (Figure 48). It is also possible to perform this action through the account selection view by dragging the account presentation cell towards the left (Figure 49). You then just have to tap the **delete** action and confirm deletion when the confirmation message is displayed.

The second option allowing to delete accounts consists in activating the edit mode of the list of accounts (Figure 50). When activated, select the accounts that you want to delete and validate the deletion with the button in the top right hand corner of the view (Figure 51).

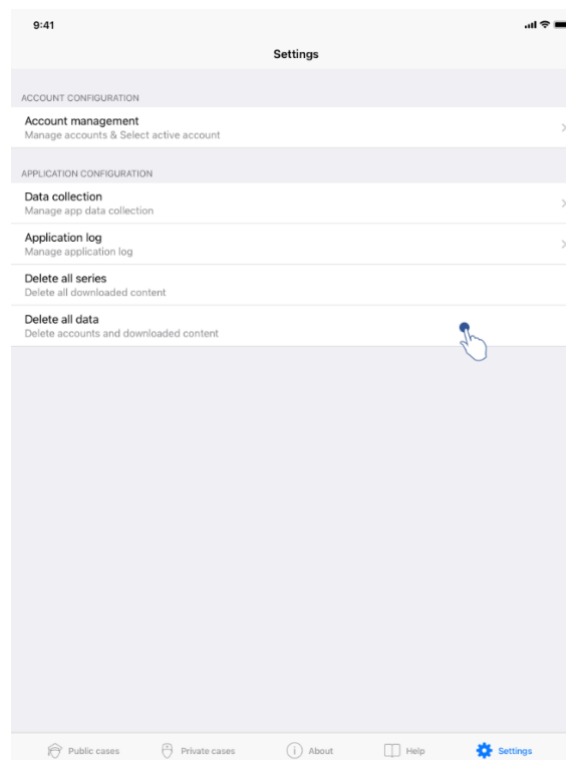


Figure 52: Delete all data from the application

Finally, it is possible to delete all accounts and their associated data. To do so, tap **delete all data** action in the application settings view (Figure 52).

8.12 How to access application parameters

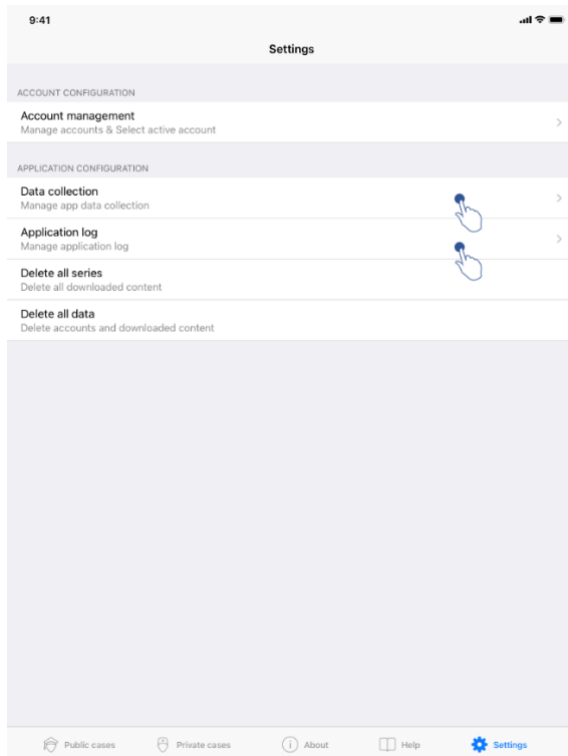


Figure 53: Settings view

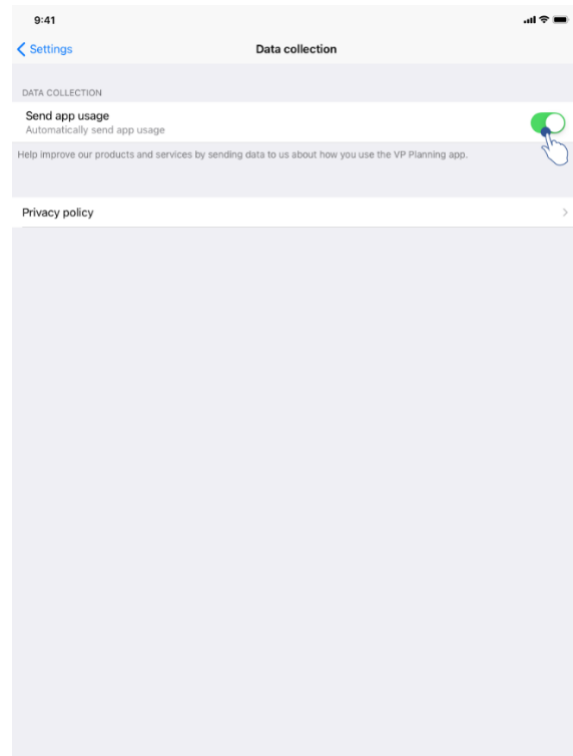


Figure 54: Data collection view

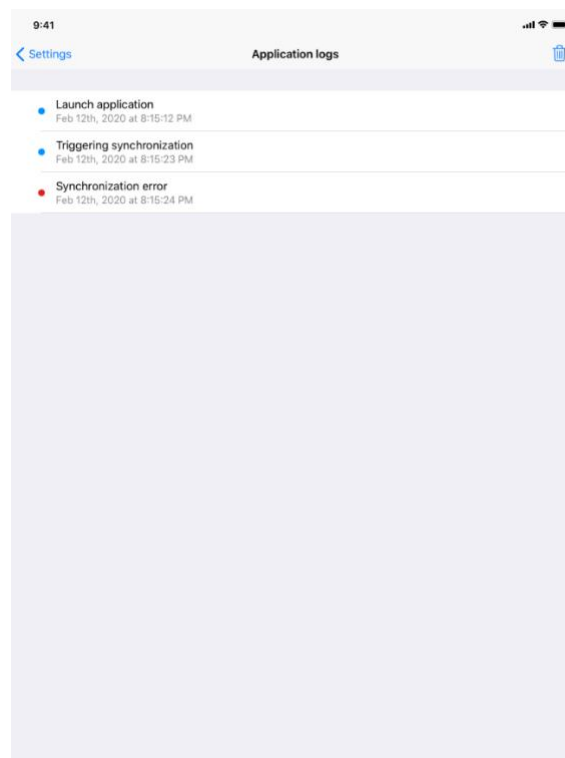


Figure 55: Application log view

The **Settings** view is accessible in the main menu bar of the application (Figure 53). The view allows in particular to access the account management view and to delete all downloaded series and registered accounts.

The view also allows to access the control view of data collection. By agreeing that Visible Patient collects usage data, you allow the application to be improved.

Finally, the view provides access to the log listing the various actions executed by the application. The log can be emptied by tapping the basket button in the top right hand corner of the view.

8.13 How to access regulatory information

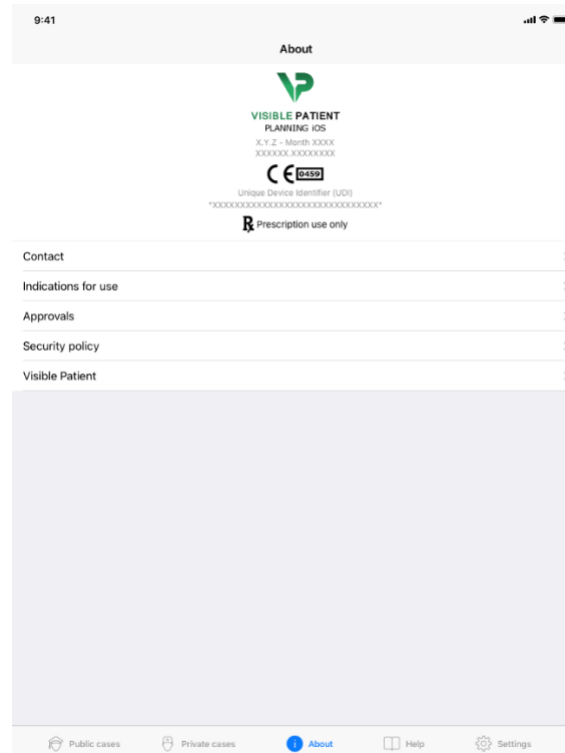


Figure 56: View about the application

Regulatory information is available in the **About** view of the application accessible in the main menu bar (Figure 56). Beside information on version and certification, the view provides access to a set of sub-views containing:

- Visible Patient contact information
- Indications for use of the application
- Information on application approvals
- Recommended security policy
- General information on Visible Patient

8.14 How to access help information



Figure 57: Help view

Information regarding access to the user manual is available in the **Help** view of the application accessible in the main menu bar (Figure 57).

8.15 How to open a Visible Patient link

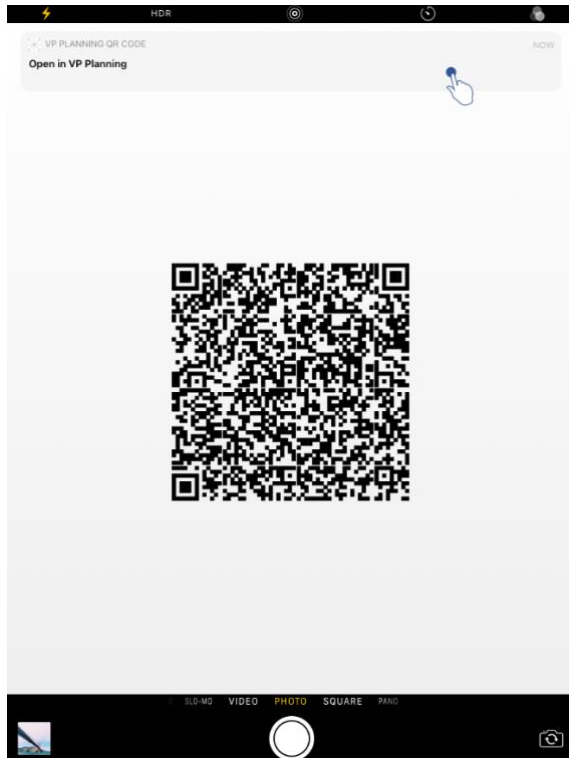


Figure 58: QR code scan

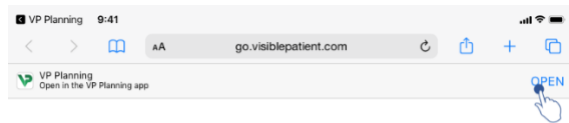


Figure 59: Opening a link via Safari

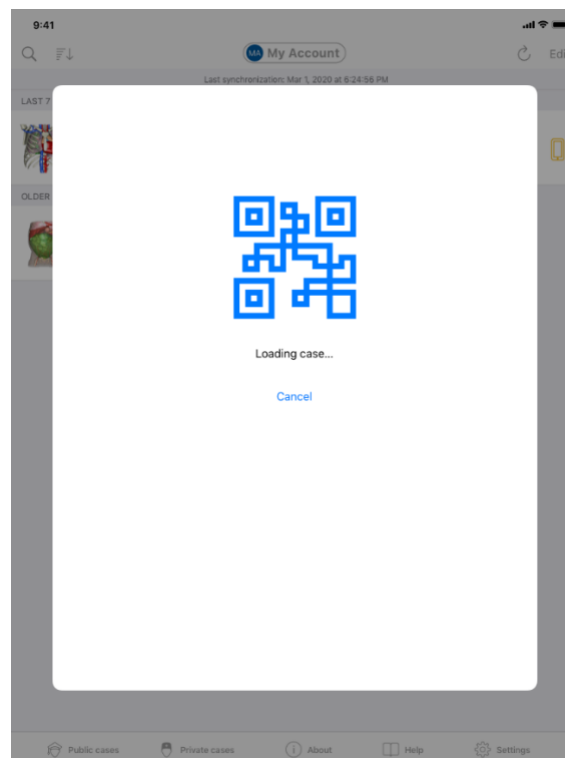


Figure 60: Loading screen of the link

Some links provided by Visible Patient can be opened within the application. There are two kinds of links:

- Links allowing to access a case
- Links allowing to register an existing account

To access a link, flash the QR code provided by Visible Patient by using the device of your phone (Figure 58) or use Safari to open the communicated link (Figure 59) using the **Open** button at the top of the page (Figure 59). After the loading screen (Figure 60), you can access the account registration view or the desired case.

Warning: to access a private case via a link, you first have to register your account in the application. Your password will be requested to recover the case if it has not yet been recovered during manual synchronization. In case several accounts are registered in the application, you will have to select the account allowing to access the case.

9 Maintenance

No maintenance is required for the VP Planning iOS application. Updates are provided via the App Store.

9.1 Application update

Under iOS 13 and iPadOS 13, the VP Planning iOS application is automatically updated by default. You will receive no notification about application update. It is however also possible to generate the update manually by visiting the [VP Planning iOS](#) application page on the App Store and by tapping the download button.

10 Problem solving

10.1 General problems

10.1.1 I cannot register my account

This section contains the various errors that can be encountered during account registration in the application.

10.1.1.1 Technical problem during the display of the server list

Message: A technical issue prevents the connection to the server. Please try again later.

Resolution: A problem on Visible Patient servers prevents from connecting. Please try again in a few moments. If the problem persists, please contact the Visible Patient support.

10.1.1.2 Application update required when displaying the server list

Message: Please update the app to retrieve the server list

Resolution: Retrieval of the server list requires application update. Please update the application version.

10.1.1.3 No internet connection

Message: No internet connection available.

Resolution: Make sure you have an internet connection (Wifi or LTE) and that the Airplane mode of the device is not activated.

10.1.1.4 Incorrect identifiers

Message: Invalid username or password.

Resolution: Make sure you have entered the right email and password on the right server. If the problem persists, please contact the Visible Patient support.

10.1.1.5 Account already registered

Message: Account already registered, this account has already been registered.

Resolution: The account you want to register has already been registered in the application. You cannot register the same account several times on the same device.

10.1.1.6 Description already used

Message: Description already used. The account description must be unique to identify it. Please provide another one.

Resolution: The description entered to identify the account is already used by another account. Please enter another one.

10.1.2 I am unable to recover my list of cases

This section contains the various errors that can be encountered during recovery of the list of cases (synchronization).

10.1.2.1 No internet connection

Message: No internet connection available.

Resolution: Make sure you have an internet connection (Wifi or LTE) and that the Airplane mode of the device is not activated.

10.1.2.2 Data not found

Message: Resource not found. A technical issue prevents to recover data from the server. If the problem persists, please contact the Visible Patient support.

Resolution: A problem on Visible Patient servers prevents data recovery. Please try the action again. If the problem persists, please contact the Visible Patient support.

10.1.2.3 Insufficient storage space

Message: Insufficient storage. Please free some space on your device to perform this action.

Resolution: Your device does not have sufficient storage space to perform this action. Please free some space on your device and try the action again.

10.1.2.4 Account not associated with a group

Message: Your account is not associated with any group

Resolution: Your account is not associated with any group. If you are a Visible Patient customer, please contact your sales representative. Otherwise, you can contact Visible Patient through the contact form on the Visible Patient website.

10.1.3 I am unable to download the series associated to cases

This section contains the various errors that can be encountered during series download. Errors described during recovery of a list of cases can also be encountered (see 10.1.2).

10.1.3.1 Corrupted downloaded data

Message: Download failed. Downloaded data is corrupted. Please try to download the series again.

Resolution: Data has been corrupted during data download. Please download data again. If the problem persists, please contact the Visible Patient support.

10.1.4 I am unable to open a series

This section contains the various errors that can be encountered during opening of a series.

10.1.4.1 Corrupted stored data

Message: Opening failed. Data stored on device is corrupted. Please delete and download the series again.

Resolution: Data of the series has been corrupted on the device. Please download data again.

10.1.4.2 Insufficient memory to open a clip series

Message: Insufficient memory. Impossible to load Clip Applying for this model. For more information, please check system requirements.

Resolution: The clip series you are trying to open needs more memory to load than the memory your device features. This problem may occur on devices that do only have 1GB RAM. To access the data, please use a more recent device featuring at least 2 GB RAM.

10.1.5 I am unable to open a Visible Patient link

This section contains the various errors that can be encountered during opening of a Visible Patient link.

10.1.5.1 No internet connection

Message: No internet connection available.

Resolution: Make sure you have an internet connection (Wifi or LTE) and that the Airplane mode of the device is not activated.

10.1.5.2 Account required

Message: Account required. Please register your account into the application to access this case.

Resolution: Make sure you have registered your Visible Patient account in the application before opening that link.

10.1.5.3 Case not available

Message: Unavailable case. This case is not available.

Resolution: The case is not available on the server. Please contact the Visible Patient support.

10.1.5.4 Unauthorized access

Message: Unauthorized access. You are not authorized to display this case. Make sure the correct account is used.

Resolution: You are not authorized to display this case. If you think you have the right to access this data, please contact the Visible Patient support.

10.1.5.5 Unsupported link

Message: Unsupported link. This link is not supported by the application. Make sure to use a valid link.

Resolution: The link you are trying to open is corrupted. Make sure to use an up-to-date application, a valid link (with no input error) or an undamaged QR code.

10.2 3D visualization problems

This section contains the various errors that can be encountered during visualization of 3D data.

10.2.1 I am unable to interact with the model

If you are unable to interact with the model, make sure interactions are activated (see 8.6.4). If the model is no longer visible in the scene, you can shift the model by tapping one of the orientation buttons (axial, frontal, sagittal).

10.2.2 I am unable to mask an anatomical structure

If you are unable to mask an anatomical structure by tapping it, make sure to use the masking tool (see 8.6.3).

During display of clip data, some structures cannot be masked with the masking tool. Segments can be masked by using the clipping tool (see 8.8.3). The network of the target organ cannot be masked.

10.2.3 I am unable to visualize volumes associated to clip data

During visualization of volumes associated to clip data, the following message may be displayed: "Inconsistencies detected during volume computation. No information available." In this case, no volume is displayed in the view. This problem occurs when an inconsistency is detected during volume computation. To solve the problem, please contact the Visible Patient support.