

Release Notes astraia - software for women's health

1.24.10

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Status: 1.24.10

astraia 1.24 is a major release which encompasses new reminder and messaging functionality, improved imaging, and a decoupling of risk algorithm and software version. astraia 1.24.10 is a minor release for languages and bug fixes. This document covers all new features and improvements for release 1.24, and the major bug fixes. Languages and issues that are new in 1.24.10 are marked with (1.24.10).

1.24.10 is available in English, Albanian, Bulgarian (1.24.10), Chinese Traditional (1.24.10), Czech, Danish, Dutch, French, German, Greek, Italian, Latvian (1.24.10), Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Spanish, Swedish and Ukrainian (1.24.10).

Thank you to all those who have contributed to this version. We are very appreciative of your support.

Attention users in Polish, Latvian and Bulgarian language: astraia uses the default for date format for your country, which is yyyy-dd-mm. If you want to enter dates in a different format, e.g. dd/mm/yyyy, astraia can be configured via a property. Please contact your local astraia representative or support@astraia.com for help.

1 Important Issues in 1.24.10 - please read carefully before updating astraia

1.1 Relicensing

(applicable only if you do not have astraia 1.24.9 or higher installed and licensed)

With the update to astraia version 1.24.9 or higher your current licenses will not work anymore and will have to be renewed via an automated process on our web site. The necessary information and instructions to do so will be generated and displayed during the updating process. If you have internet access from your astraia server, you can renew the license immediately by browsing to the site <https://www.astraia.com/relicenser.html>. Otherwise you will need to copy the file "astraia_info_Customer_Id.zip" from your installation folder on a memory stick, or mail it to a computer with internet access, and browse to the site <https://www.astraia.com/relicenser.html> from there. On the web site, you will be asked to upload "astraia_info_Customer_Id.zip". The file will be processed and immediately a new license will be generated, which you can download and import in your installation. We advise you to perform an update well outside your office hours in case you should encounter difficulties with this process.

Why is this additional step necessary?

As provider of a registered medical product, astraia has to adhere to strict quality guidelines. As part of these rules it is necessary to store all relevant technical data about your astraia installation in our customer database. We have to provide the health authorities with this data

on request, for example in case of a field safety corrective action (FSCA). So far this data was collected manually and only from few customers. The relicensing with version 1.24.9 P1 is the first step to collect and update this data on a regular basis and in an automated fashion. After the update to 1.24.9 P1 or higher, from a version 1.24.8 or lower, your previous license will not work anymore. For a new, valid license please visit <https://www.astraia.com/relicenser.html> and follow the instructions, which will require you to upload the "astraia_info_Customer_Id.zip" file. The website will immediately create a new license free of charge for you to continue using astraia as before. The file contains the proof that you have updated to version 1.24.9 P1 (or higher), and technical information about your installation. This information will be used to update the customer documentation in our systems, and will not be used for other purposes than support and administration inside astraia.

What information will be uploaded to astraia servers?

After installation of 1.24.9 P1 or higher, astraia creates the file "astraia_info_Customer_Id.zip". It contains the current license file (astraia.lic) and an info file (astraia_info_Customer_Id.txt). The license will be renewed after the upload and will remain valid until you update to the next major version. You can download it and can continue working with astraia as before. The info file with contains technical information about your installation is human readable and can be opened with an editor.

Related JIRA issues:

ASTWINST-97, ASTWINST-98, ASTWINST-99, ASTWINST-100 - warning messages for the installer.

AST-4399, AST-4443, AST-4424 - adaptations of warning messages in astraia.

1.2 Known problems

Do not update your installation to 1.24.x if you are still using a Sybase 9 database (please check in Help -> About -> DB vendor name and version). Please contact our support team to migrate your database to a supported version.

JIRA-issue	Problem	Workaround
AST-4417	For some users, in some cases, the reporter text fields in the Conclusions and Letters screen show erratic behaviour, e.g. if the user tries to add text at the beginning, it does not show up in the field, but if the patient is closed, saved and reopened, the text is there and the user can continue writing.	Two workarounds are available: <ol style="list-style-type: none">1. Pressing Ctrl+Z should reset the layout and you can enter text normally again.2. Save and close patient file, and reopen.

JIRA-issue	Problem	Workaround
AST-4317	In Pregnancy - Doppler, if nothing else in the screen is filled except data in the "Fetus 1" tab, and a new, empty fetus is selected, the bolding of the screen will disappear and the Doppler data will not be printed for this examination.	Delete the empty fetus or move the focus back to the filled tab before you print.
AST-4481	Again in Pregnancy - Doppler, the same goes for an empty "Fetus 1"-tab, when there is data in the "Fetus 2" tab. The data will not print.	Delete the empty tab.
AST-4320	When "individual screening options" are enabled, and you calculate the risk newly for a patient that has not been saved yet, the following workflow will trigger the following behaviour: When the risk is calculated with specific options, and you leave the risk calculation screen in order to come back to it later, the individual screening options will be ticked according to the global options, even if the risk had been calculated earlier with different options. astraia will also ask for a recalculation of the risk. This happens only when the patient has not been saved, closed and re-opened in the meantime.	<p>Check the options again according to the settings with which the risk has been calculated before, and save the patient.</p> <p>To prevent this behaviour: Save the patient immediately after calculating the risk for the first time.</p>
AST-4239	When the 1st trimester screen is opened, astraia always asks whether the user wants to save the patient, even when the doctor has not changed anything.	The dialog can be answered with "no" and the patient can be closed.
AST-4858	When an existing patient record with data in Biometry/Anatomy is opened, astraia always asks whether the user wants to save the patient, even when the doctor has not changed anything.	The dialog can be answered with "no" and the patient can be closed.
AST-4304	When the user wants to add a new fetus, and an error message appears for another reason, there will always be a second error message that says "There was an unexpected error selecting the record".	Close the error message.

JIRA-issue	Problem	Workaround
AST-4299, AST-4290	When the doctors dates a pregnancy, and changes the entry used for dating, the warning that the gestational age may have changed, and that the pregnancy should possibly be redated, does not always appear, e.g. when the dating is based on a calculated field.	As usual, be aware: Whenever you change the value of the parameter used for dating GA within the examination you dated the pregnancy in, you might need to recalculate GA.
AST-4275	Operator, Supervisor and Counselor codes do not work properly when the code is longer than 8 digits.	No workaround available.
AST-4485	The chart titles for Biometric Charts for twins are not translated in French.	No workaround available.
AST-4014	When trying to open an image, under certain error conditions, it can occur that the Image Viewer might remain unresponsive (the user sees the "loading image" icon) until a timeout occurs.	Close the Image Viewer window and reopen it.
AST-3828	After updating to 1.24.5 or a later version, it can happen that images in a printout preview taken from the Audit trail appear pink.	Take a look at the printout itself. It is shown correctly.

JIRA-issue	Problem	Workaround
AST-4705	Dating of pregnancy by CRL is not possible when In Options - Charts - Dating "Calculation (Robinson formula, Loughna et al. Ultrasound 2009; 17: 161-167)" is selected and CRL is ≤ 35.9 mm.	Two workarounds are available: <ol style="list-style-type: none"> 1. Select Robinson as growth chart for CRL in Options - Charts - Charts and select "Use growth chart" in Options - Charts - Dating. 2. Keep "Calculation (Robinson formula, Loughna et al. Ultrasound 2009; 17: 161-167)" in Options - Charts - Dating but additionally select in Options - Charts - Charts the growth chart "CRL early". Note that with this workaround the pregnancy will be dated according to the "Robinson formula, Loughna et al. Ultrasound 2009; 17: 161-167" for $CRL \geq 36$mm, whereas for $CRL \leq 35.9$ mm the pregnancy will be dated based on "Papaioannou et al. Fetal Diagn. Ther 2010; 28(4): 207-219".
AST-4789	In Latvian in Maternal Structures - Adnexal masses - Presence of Metastases the list entry "no" appears in English.	No workaround available.
AST-4863	When trying to import images to a patient that had not been saved yet, the images are not always imported and subsequently do not show in the Image Viewer.	Save the patient and in case the images are still not shown in the Image Viewer, import the image(s) again.

Please also note that the options to deactivate the Audit Trail in Options -> Administrator are still described at several places in the English manual, although they have been removed for 1.24.8 (see below).

1.3 Important changes

<AST-4130> - It is not possible to deactivate the Audit Trail anymore. All Audit Trail specific options have been removed from Options -> Administrator. (1.24.8)

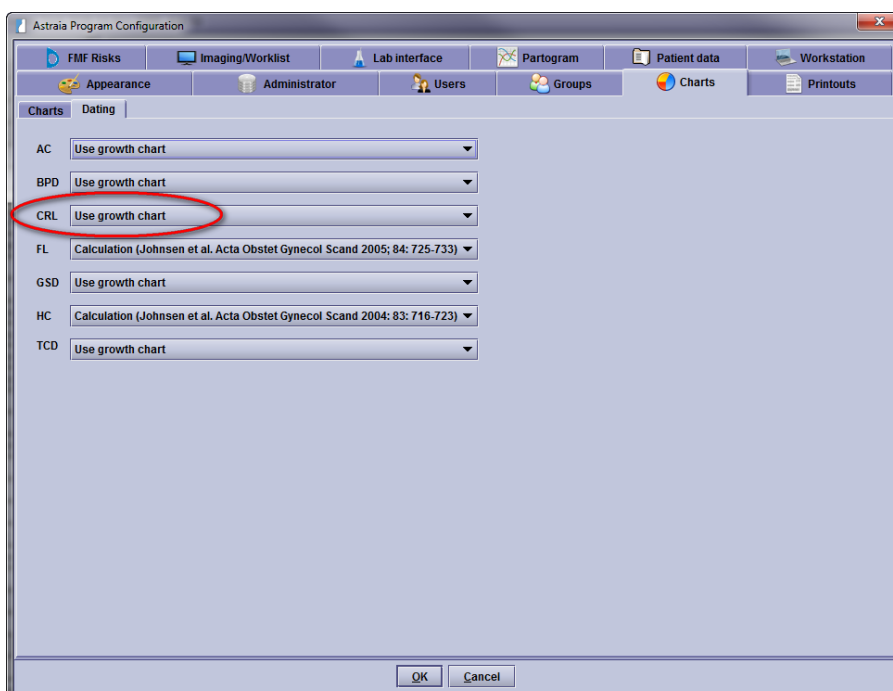
Measurements: This release contains many changes and enhancements regarding measurements. Details can be seen in the sections of this document titled "Image Viewer". This resulted in changes in the measurement format. Old measurements are therefore converted during the updating process. Should measurement conversion fail for some images, the user will be warned with an error message after the conversion process. The exact images for which the conversion has failed can then be looked up in the log files. This can be the case for corrupt measurements, and a specific implementation of the area tool. These measurements cannot be converted.

When the user tries to open an image with old or corrupt measurements in the image viewer, a warning is displayed that measurements of an unsupported format are present that cannot be displayed. Should the user want to make new measurements, a warning is displayed that if he continues, the old measurements will be deleted. Before deletion, the measurements will be backed up in a database table called ImageBackup for further reference and retrieval. (1.24.4)

<AST-2315, AST-3436> - The 2nd Trimester risk assessment is available again. The 2nd trimester soft marker assessment has been adjusted according to Agathokleous M, Chaveeva P, Poon LCY, Kosinski P, Nicolaides KH. Meta-analysis of second-trimester markers for trisomy 21. Ultrasound Obstet Gynecol 2013; 41: 247-261. (1.24.4)

<AST-3377, AST-3462> - Printing reports with very many images has been known to use up too much memory and cause problems for some time in astraia. Therefore, limitations to the number of images to be added have been introduced. The limit is 100 images for a configuration with 512 MB memory or lower, and 200 images for configurations with 1024 MB. (1.24.5)

<AST-3388, AST-3065> - The new dating methods in Options --> Charts --> Dating may not work from the same GA as dating with Charts. When dating does not work as it used to be in older astraia versions, please check whether "Use Growth Chart" is selected for the relevant entry. (1.24.4)



2 Highlights - Reminder System

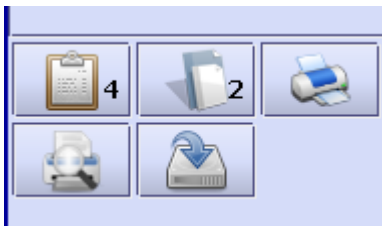
<AST-1315>

This feature is designed to record patient-linked tasks.

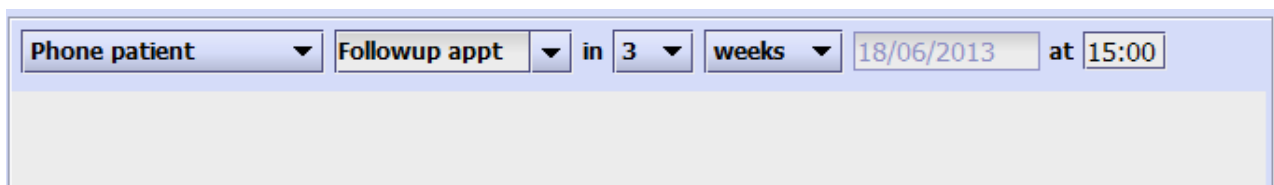
- When associated with a specific date, astraia will remind the user about the task: On and after the due date, the reminder will appear in the **Outstanding Reminders** view.
- If a **Reminder** has no date, then it can be seen in the **List** view. This can be used, e.g., as reminders for weekly conferences, or as a reference to rare cases.
- The attributes of a reminder (including whether or not it has an action date) are determined by the **Action** type; Actions are configurable.
- All **Reminders** can be set to *completed*, meaning either that the reminder action has been performed, or that the patient no longer needs to be kept on the list.

2.1 Reminders in action

The patient record must be open. Reminders are accessed via the Action Panel at the bottom left of the patient record window (first icon):



This patient has four open reminders. Clicking on the Reminders icon shows the Reminders dialog, which displays any open reminders and contains the controls for adding a new reminder.



The first list selects the action type. Depending on the action selected, other fields are then shown. These are:

- Description. This is a 'memory list' - if instead of selecting from the list you enter a new description, it will be added to the list the next time you select the same action.
- number of time units (1-30)
- time unit (days / weeks / months)
- the action date (calculated by adding the selected time units to today's date)
- the action time

Date and time are shown only if they are appropriate for the selected action. Any action which involved e-mail will only be visible if the patient's e-mail address has been entered in Demographics. If astraia is not configured to send e-mails, the system's e-mail client will open, populated with the e-mail address, subject and body filled in earlier in the reminder system. <AST-2474>

Users should be encouraged to pick descriptions from the list, if possible, rather than typing endless variations.

It is possible to associate an action with one or more user groups. If this is the case, the action will not be visible to users who are not members of the listed group(s).

2.2 The Reminder Window

In the Reminder window (on the desktop) a list of reminders is displayed. The contents are determined by the view (see below). For any reminder, the left-most button opens the corresponding patient record and the right-most button opens a completion dialog. All views can be sorted by clicking on column headers.

The **View** list selects from three views:

- Outstanding reminders. This is a list of all dated open reminders which are due on or before the current date.
- Lists. This is a list of all un-dated open reminders for a specified list.
- Closed reminders. This displays all completed records.

On clicking the **Complete** button for a reminder a dialog is shown. Additional text can be entered in Comments, and if the OK button is pressed the reminder is closed and removed from the current view.

The Options button in the top right of the Reminder window is available to admin users only. The **Options** dialog lists the pre-programmed actions.

By clicking on the 'Edit action' button, the action properties can be set. For a new action (click on 'New action'), the action name must also be entered.

3 Highlights - Imaging <AST-2093>

The imaging functionality has been greatly improved and redesigned to allow for asynchronous operation.

- Image loading is now asynchronous <AST-2382>. The user does not have to wait until all images are transferred until he can work with the patient form.
- If the user closes the patient window while it is loading images, astraia will deal with aborting the connection to the PACS correctly.

3.1 Image Browser

AST-1158	The layout of the Image Browser is now customizable. The number of columns is adjustable by making the image browser panel wider. The images grow up to the point where a new column can fit in.	1.24.1
AST-2391	Multiple images can be selected and de-selected via Ctrl and Shift keyboard modifiers .	1.24.0
AST-2440	The layout of images in the Image Browser and Image Viewer has been improved .	1.24.1
AST-2442	When hovering the mouse over a thumbnail image in the Image Browser, a bigger preview of the image will be shown if the image has been already loaded from the server .	1.24.2
AST-2443	Image selection in the browser is now more visible and obvious. Selected images are highlighted and the border is framed .	1.24.0



3.2 Image Viewer

AST-1113	Images post processed by the user can now be saved as a copy of the original image. I.e., all annotations, changes in contrasts, measurements etc. can be saved together with the image.	1.24.1
AST-2065	A new tool has been implemented in the image viewer: The "select" or "default" tool. It is selected by default if no other tool is selected. The tool allows to move annotations like measurements, texts and labels around in the image, and can be used to change the focus of the zoom.	1.24.1
AST-2178	Using the select tool, users can now edit measurements and other annotations. A right click on the element to be edited opens a context menu that allows to edit, use or delete the element.	1.24.1

AST-2360	Annotations have now properties like colour that can be edited.	1.24.1
AST-2437	Measurements, arrows, annotations etc. can now be tagged by the user. The tag can be moved along the annotation with the mouse to be placed in the least interfering spot. When measurements were used in astraia, a tag is automatically generated that is stuck to the measurement. However, it can be edited in the same way as any other tag.	1.24.1
AST-1835	Images can now be exported from the Image Viewer directly. Thus, also images that have been opened from the image query in Statistics can be exported.	1.24.1
AST-2529	It is now possible to have more than one Image Viewer open at the same time (e.g. the images of several patients and/or several image search result windows).	1.24.1
AST-2205	The angle tool starts drawing from the centre now instead from the end of one of the legs.	1.24.1
AST-2431	The new parallel line tool makes it possible to measure distances between parallel lines.	1.24.1
AST-2348	Zooming works now continuously and smoothly instead of in fixed steps.	1.24.1
AST-1836	When adding notes to an image, the user may want to add the same note to several images in a row. It took an unnecessary amount of time to do that because the tree structure collapsed back to its original state when changing from one image to another. This has been improved, so that the tree structure now remains the same when changing from one image to another.	1.24.5

4 Highlights - Messages

AST-1585	A message for another user can now be created by using the menu 'File - Message to users'. When messages are available, a flashing button appears in the right corner of the menu bar. Click it to view messages, tick 'mark as read' to dismiss them.	1.24.0
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5 Highlights - Usability

AST-815	The summary screen is now configurable, this can be done via Edit --> Configuration. Go to the screen where you want additional fields to show up in the summary screen. In the section "Summary Screen", click on the "+", then click on the field you want to add. Last save changes.	1.24.0
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AST-1480	All functionality that is available through the icons on the application background is now also available through the menu Tools.	1.24.1
AST-1550	List fields that have already been filled can now easily be emptied again. The user can either select the blank field from the pull-down menu, or perform right click --> Delete, or press "Del" when the field is selected.	1.24.0
AST-2223	Diagnosis/procedure code lists can now be sorted by drag and drop. In earlier versions, the diagnoses could only be dragged to a different parent node in the hierarchy. Now, the lists can be sorted within the hierarchy too.	1.24.0
AST-2345	The search functionality for diagnosis and procedure lists has been improved. It is now possible to search for substrings as well as for procedure codes.	1.24.1
AST-3455	When opening the examination screen, the default focus is on the "Exam date" field. For users that fear this could cause them to change the examination date by accident, there is now the possibility to set the default focus to any other field by setting the property System.AltFocus to the desired component name (e.g. Exam.Department). Please contact the astraia support (support@astraia.com) if you want to customize this setting.	1.24.5
AST-4006	Searching in Lookup tables has been greatly improved. It is now possible to search in each column of the table. The result is a filtered table containing the search strings for each column.	1.24.8

6 Other New Features & Improvements

6.1 Pregnancy

AST-463	In the History screen, there is now an option "The patient wants to know the fetal sex". If this is set to "no", a reminder pops up every time the patient is opened.	1.24.0
AST-1965	Microarray results for karyotyping of mother and fetus have been added in the 'Investigations' screen.	1.24.2
AST-1967	In the Danish language version, the abdominal circumference of the baby and the birthweight z-score have been added in the Outcome screen.	1.24.0
AST-2176	In pregnancies with multiples, fetuses and children in outcome are now linked.	1.24.0

AST-2284	Aberrant right subclavian artery (ARSA) has been added to the list of heart anomalies in Ultrasound --> Biometry/Anatomy --> Detailed Anatomy --> tab Heart.	1.24.0
AST-2285	A new screen for non-invasive prenatal testing (NIPT) allows the documentation of results obtained from cf DNA testing.	1.24.0
AST-2743	Any performed treatments related to cervical assessment can be entered in a new section on the screen 'Cervical assessment'.	1.24.0
AST-2541	In sex-specific charts such as birth weight, only values of children of the respective sex will be shown, even in pregnancies with different-sex multiples. E.g. if a male child's birth weight chart is opened, a second female child's value will not be shown in the chart, but a third male child's value will be.	1.24.0
AST-2898	Pregnancy duration can now be configured between 280 days and 282 days via astraia -> Options -> Patient Data -> Pregnancy Duration.	1.24.0
AST-3124	In the Norwegian version, additional indications have been added: 'Maternal age' (check box) in the screen 'Maternal Assessment' and 'Child with serious malformations' (helper list) in History --> Previous Pregnancy.	1.24.2
AST-3144	The Combs method to calculate the estimated fetal weight has been added: $EFW = (0.23718 * AC^2 * FL) + (0.03312 * HC^3)$; EFW in g, all others in cm. (Combs et al.: Sonographic estimation of fetal weight based on a model of fetal volume. Obstet Gynecol. 1993; 82(3): 365-70).	1.24.2
AST-3270	In Conclusions, alternative screen Pregnancy conclusions (+mat. Diag. + Proc.), two more lines have been added for procedures.	1.24.3
AST-3227	The 2nd trimester risk screen had to be removed due to certification issues. It is greyed out for all patients except those where data has previously been entered. This data can still be retrieved via the screen. Please note: The screen has been reactivated in 1.24.4; see <AST-3436>.	1.24.3
AST-3280	New fields for PIGF, sFlt-1, and the ratio between the two have been added to the screen Maternal Assessment --> Maternal Blood --> Serum Biochemistry. These can be used to track these markers throughout the pregnancy as diagnostic tool for preeclampsia.	1.24.8
AST-3880	The fields 'EDD by scan' and 'EDD by dates' ('DPA par écho' and 'DPA par DDR') were not shown when astraia's language was set to 'French (France)' but they are required in Luxembourg for legal reasons. A new alternative screen for the Ultrasound screen called 'Ultrasound header (with EDD for Luxembourg)' is available which will display these fields even when French is selected.	1.24.6

AST-3990	The field TAD has been added to First Trimester --> Ultrasound, as well as a calculated field for the ratio of BPD/TAD. This ratio is a soft marker for spina bifida in the 1st trimester. according to Simon EG, Arthuis CJ, Haddad G, Bertrand P, Perrotin, F: Biparietal/transverse abdominal diameter ratio \leq 1: potential marker for open spina bifida at 11–13-week scan. Ultrasound Obstet Gynecol 2015; 45(3): 267-272.	1.24.8
AST-3997	The possibility to calculate the Estimated Fetal weight with the Hadlock formulas (Hadlock (BPD-HC-AC-FL), Hadlock(FL-AC), Hadlock(HC,AC,FL)) has been extended to GA 112 - 294 days.	1.24.6
AST-4075	The work flow for the risk assessment of Maternal Structures --> adnexal masses has been improved. For the simple rules, all fields have to be filled now before the risk can be assessed. If papillary projections are present, "Irregular internal cyst walls" is set to "yes" as those are then irregular per definition.	1.24.8
AST-4171	The screen Fetal Assessment --> Biophysical Profile has been improved. The individual scores for each list selection are displayed in addition to the total score. The Manning BPP score has been adjusted to a newer publication: S11-S19 in Liston R; Sawchuck D; Young D: Fetal health surveillance: antepartum and intrapartum consensus guideline. JOGC 2007; 29(9 Suppl 4): S3-S56.	1.24.8
AST-4656	In the SIEOG specific part the list entries of Father ethnicity has been adapted to the wording used in the paper and the following entries can now be selected: European, East Asian, Central African, North African. Previously entered values will be shown but cannot be selected anymore. Furthermore, a new field for the ethnicity of the mother has been added containing the same list entries like the list of father ethnicity. The formula will now always take into account the mother's ethnicity as this is to be preferred to the father's ethnicity in case of parents of mixed origin. For Father ethnicity, hide the existing entries White, Black African, Other. They will show in old cases but are not available in new cases. 2. For Father ethnicity, add new entries European, East Asian, Central African, North African. They can be used for new cases. 3. Add a new field Ethnicity in the Mother section of the SIEOG section, right below Parity. It has the same entries as the new father ethnicity field, i.e. European, East Asian, Central African, North African. 4. Adjust the formula so that it does not use the father ethnicity anymore, but the mother ethnicity. European like White before the change North African and Central African like Black African before the change, using their respective FL East Asian like Other before the change	1.24.10
AST-4279	The ratio BPD/TAD is a soft marker for Spina Bifida in the 1st trimester and was recently added to astraia. A new info button next to the relevant BPD/TAD field explains the usage of this marker according to	1.24.10

	Simon EG, Arthuis CJ, Haddad G, Bertrand P, Perrotin, F: Biparietal/transverse abdominal diameter ratio \leq 1: potential marker for open spina bifida at 11–13-week scan. Ultrasound Obstet Gynecol 2015; 45(3): 267-272.	
AST-4246	The ratio BPD/TAD is a soft marker for Spina Bifida in the 1st trimester. To facilitate the usage of this marker, a red exclamation mark is displayed to the right of the field if the value is smaller than or equal to the threshold 1 (BPD/TAD \leq 1). For details on the ratio and its clinical usage see Simon EG, Arthuis CJ, Haddad G, Bertrand P, Perrotin, F: Biparietal/transverse abdominal diameter ratio \leq 1: potential marker for open spina bifida at 11–13-week scan. Ultrasound Obstet Gynecol 2015; 45(3): 267-272.	1.24.10

6.2 Image Viewer

AST-1616	A warning message is now shown when a user tries to import a DICOM image from a not supported modality. Supported Modalities are "US", "EC", "CD", "DD".	1.24.1
AST-1784	New DICOM commands have been implemented that return only the number of images specific for the query instead of the number of all images eligible for the query. The implementation supports Modalities in Study (0008,0061), Number of Study Related Series (0020,1206), Number of Study Related Instances (0020,1208), Number of Series Related Instances (0020,1209), Number of Patient Related Studies (0020,1200).	1.24.1
AST-1834	Browsing through images in the image viewer with the arrow buttons changes the selected image in the image browser consistently now.	1.24.1
AST-1863	The image calibration dialog works more intuitively now - first the user measures the distance, and then adds the corresponding value.	1.24.1
AST-1923	The UID astraia generates when composing new DICOM objects has been improved. The new UID allows to discriminate between images from different studies on the same day, and assign images correctly.	1.24.1
AST-1947	The Image Viewer is now disabled for users of a group that can not view examination data.	1.24.1
AST-2038	Clicking on the background of the Image Viewer de-selects all selected images.	1.24.1
AST-2063	Once an image is opened, it is now possible to browse through the images in the image browser with the page up / page down keys.	1.24.2
AST-2105	Thumbnails are of a much higher resolution now once the image has	1.24.1

	been opened at least once.	
AST-2167	A new memory manager handles memory used for images and videos much more efficiently and also prevents unnecessary image downloads from PACS.	1.24.2
AST-2208	It is now possible to measure obtuse angles. Click on the centre button of the mouse before clicking for the end point of the second leg of the angle.	1.24.1
AST-2303	The size of arrows in image annotations can now be changed with the mouse wheel during drawing.	1.24.1
AST-2304	When a mask is applied to an image, the masking tool is greyed out. To draw a new mask, the old one should be deleted first.	1.24.1
AST-2313	To prevent accidental tool switches the imaging toolbar is now disabled while the user is doing a measurement.	1.24.1
AST-2331	When several images of different sizes are opened in the image viewer, the zoom level is now adapted dynamically depending on the size of the image. E.g., when zooming out of an image, the old behaviour would have shrunk the smaller image by the same proportion than the larger, whereas now smaller images shrink not necessarily proportional to the bigger image.	1.24.1
AST-2434, AST-2310	Images that have been previously calibrated with astraia can now be recalibrated. In case of recalibration, all previous measurements are deleted.	1.24.1
AST-2436	It is now possible to play several videos at the same time in the same instance of the image viewer.	1.24.1
AST-2439	When several images are opened in the image viewer at once, the user can now change the layout via View --> Columns.	1.24.1
AST-2444	The optimal zoom chosen by the Image Viewer as the minimum zoom that can fit all the images in the screen has been improved.	1.24.1
AST-2524	It is now possible to select and open multiple images from the image finder, in the same way as with the image browser.	1.24.1
AST-2614	When the port which astraia is configured to use for DICOM connections is in use, a warning message appears explaining that a connection cannot be established.	1.24.1
AST-2182	The circumference of an ellipse is now calculated more accurately, using the Ramanujan 2 approximation.	1.24.1
AST-2312	Thumbnails now keep their aspect ratio when resizing.	1.24.0
AST-2318	More than one image can now be selected from the Image Viewer. The	1.24.0

	Image Viewer keeps a history of previous views and lets you navigate through them with the arrow buttons.	
AST-2430	DICOM studies with the same study date can be shown separately in the Image Browser.	1.24.1
AST-2418, AST-2676	The display of errors and loading progress for images and clips in the Image Viewer has been improved to be more informative.	1.24.1
AST-2564	The number of threads doing a C-MOVE concurrently can be configured. This is useful on PACS systems where the number of channels is limited to prevent astraia from occupying all available channels.	1.24.2
AST-2575	If DCM images are imported whose patient name or patient ID is different from the patient's name/ID in astraia, a warning message appears. If several images are imported at once, it is now possible to click on 'Yes to all' which will cause astraia to import all images where the problem is the same.	1.24.1
AST-3078	If there is not enough Java Heap Memory free to play a video, an error message is displayed directly on the image representing the video in the image browser.	1.24.2
AST-3300	When updating from 1.23 versions or older, measurements are converted to the new format. The old measurements are now copied into a separate backup table for easier retrieval in case they are needed.	1.24.4
AST-3337	When opening a patient file with images, the newest images are now loaded first.	1.24.4
AST-3426	While an image is loading in the ImageViewer, there is an animation displayed indicating that the currently displayed image is a scaled version of the thumbnail, not yet the actual high-resolution image.	1.24.4
AST-2468	The colour that was used for callipers and other measurement tools in the Image Viewer was black which was hard to see on US images. This has been changed to light green during editing and to white when the measurement is finished.	1.24.5
AST-2732	Early 1.24 versions had a problem with images and thumbnails being discoloured when processed during an update from an earlier version. They appeared red. This has been fixed.	1.24.5
AST-4373	Volume files now carry a new icon in the Image Browser to indicate their file type. The icon for clips has been improved.	1.24.10
AST-3643	When exporting images in 1.24 versions of astraia, the chosen file format was not saved and had to be selected for every export. This has been fixed. Now the previously chosen file format will be saved and	1.24.10

	automatically selected in the export dialog. For the first export, the default file format has been set to JPG.	
AST-4650	When exporting an image, the default filename used to be automatically filled in earlier versions of astraia. This was not the case anymore in 1.24 and has been fixed. By default, the filename is now set to "patient" with the patient ID appended.	1.24.10

6.3 Image Browser

AST-3240	When the user selects images from Image Browser (e.g., for printing), the number of images selected is now shown.	1.24.5
AST-3407	In older astraia versions, clips could be selected for printing, resulting in the first frame to be printed. Now a message warns the user that he has selected a video clip for printing which will be removed from the selection if he continues.	1.24.5

6.4 Reminders

AST-3145	In Reminders - Options - Edit actions, it is now possible to delete actions.	1.24.3
AST-3146	When a reminder with a due date and time is created, the time field can now be set to the current time with a double click.	1.24.3

6.5 Diary

AST-669	Similarly to the Audit Trail, changes in the Diary (such as adding appointments or booking patients) are now tracked in a separate Diary Audit Trail. It can be accessed via a button in the Diary control panel.	1.24.0
AST-1232	Create appointment in x months for Gynaecology cases: In astraia menu select Data --> Appointment; a popup will appear which allows you to create an appointment in the future where the default date is 12 months in the future.	1.24.0
AST-1470	In appointment creation, it is now possible to copy and paste values containing spaces into the fields "Name", "Other names" and "Town". A scrollbar has been added for the address and the notes field.	1.24.0
AST-1481	The E-mail button in the diary's appointment dialog is now disabled when SMTP is not configured.	1.24.0
AST-2010	When deleting an appointment, the patient name and time of	1.24.0

	appointment is shown in the confirmation dialog to make sure the user does not accidentally delete the wrong appointment without noticing it.	
AST-2973	In network installations, the Diary status was not refreshed immediately in all clients, only after a user action. Now, when a patient is marked as 'arrived', 'seen' or 'missed' in an open client, these changes take immediate effect in other open clients.	1.24.2

6.6 Database Queries

AST-1158	A category can now be added to each query to make sorting and filtering queries thematically easier.	1.24.0
AST-1830	In queries, a checkbox has been added whether to include hidden entries in the query or not.	1.24.0
AST-2102	Users are now able to put notes to queries to explain more in detail why or how the query was created.	1.24.0

6.7 Lab Interfaces

AST-1361	It is now possible to send a request to BRAHMS Kryptor without the hospital number.	1.24.1
AST-2503	A lab interface for AutoDELFI A by PerkinElmer has been added.	1.24.1
AST-2026	The DELFIA Xpress interface can now be configured to accept patient information in Cyrillic, Czech, Greek, Pinyin, and Polish characters.	1.24.0
AST-3667	When the SSI lab interface is used, it was necessary to put a \$ sign into the sample number field so that the interface retrieves the lab results using the hospital number rather than the sample number. This is not always the desired behaviour and has been made configurable using a property. Please contact support@astraia.com for further instructions.	1.24.9
AST-3872	PIGF values can now be transmitted via the Brahms KRYPTOR lab interface.	1.24.8

6.8 Audit

AST-1379	In the audit, the pulldown menu could be cluttered with many inactive operators. To prevent this, only current FMF operators show up in the audit now.	1.24.0
AST-2353	The first trimester audit can now be performed per department.	1.24.0

	Selecting a department in the startup dialog will include only operators from that department in the statistics. Department = all shows statistics for all operators.	
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6.9 Patient Data

AST-1906	The Hungarian social security numbers (TAJ szam) are now checked for correctness.	1.24.0
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6.10 User Interface

AST-1412	When in screen configuration the indication screen is set to obliged, it is now nevertheless possible to enter the patient's demographic data and closing the patient without "Error - Screen indication must be filled" popping up. Now, this pop-up only enforces filling the indication screen when an examination has been created.	1.24.0
AST-1573	It is now possible to create a new case for a patient while having an old case for this patient open. In the screen Patient Details, Open the menu Data --> Change case --> New case.	1.24.0
AST-1615	The content of the Overview window (F5) can now be printed.	1.24.0
AST-1651	All diagnoses are now shown in the summary screen. If the list is too long, the full text is shown as a tool tip.	1.24.0
AST-1769	It is now possible to search for a patient record by the name of the referring doctor. In astraia Options --> Patient Data checkboxes "Search by doctor" and "Ref. Doctor". In the Patient Lookup screen, a field "Doctor" is then added. Search there by the surname of the referring doctor.	1.24.0
AST-1954	When a user tries to delete a user defined field that contains data, a warning message is now shown.	1.24.0
AST-1966	When adding a new diagnosis, multiple entries of the diagnosis tree can now be selected via Ctrl - left click.	1.24.0
AST-2506	In the modules Pregnancy, Gynaecology and Colposcopy, it is now possible to add an "operator code" field to the ultrasound screen, maximum is 15 digits (select alternative screen Ultrasound header incl. code; e.g., for the Belgian INAMI/RIVIZ codes).	1.24.0
AST-2515	When checkboxes are greyed out because a filled block is opened, the text associated to these checkboxes stays now black and is thus easier to read.	1.24.0

AST-2555	Setting the Patient demographics screen to the Netherlands-specific version now allows town names with a leading special character to be entered. This makes it possible to enter town names such as 's-Gravenhage correctly.	1.24.0
AST-2827	The Examination screen can now be configured to contain RIS-style Patient Visit Information.	1.24.0
AST-3021	The Biometry / Anatomy and Growth Scan screens can now be configured not to calculate the deepest pocket in the amniotic fluid.	1.24.4
AST-3182	The category of the doctor is now shown in the 'Referring Doctor(s)' field of the Examination header.	1.24.2
AST-3200	The patient list search performs now better which is especially relevant when conducted over a slow network connection.	1.24.3
AST-3262	When searching in the referring doctors list or any other table, in 1.23 versions the search started in the column that is used for sorting, by default the first column. In 1.24, the search covers all columns and also searches for substrings, not only starting strings. Users that do not like this behaviour can set the new property System.LookupAllColumns to false.	1.24.5
AST-3451	When new charts are added in astraia for fields that did not have charts before, they will now automatically be active after an update.	1.24.5
AST-3776	The action panel in the Navigator consisting of four buttons for adding reminders, printing, displaying the print preview, saving and closing the patient can be hidden if necessary, please contact the astraia support for details.	1.24.5
AST-3791	It may happen that a patient is locked, e.g. due to a technical problem. In those cases it is possible to manually unlock the patient and start working with the data. However it needs to be made sure first that the patient is not actually opened and being worked on on another computer, e.g. by mistake. Otherwise serious data corruption can occur. A new confirmation message explicitly asks the user before unlocking to make sure that the patient is not opened on another computer in order to avoid problems.	1.24.6
AST-3854	If a preliminary license is in use, a message on the desktop of astraia will display the date on which the license will expire. After that date, astraia can only be used with a new license.	1.24.6
AST-4264, AST-4245, AST-3663	Fields that appeared in different screens could have different precisions, as acceptable ranges for biometry or biochemistry values can vary as the pregnancy progresses. However, this could cause problems when users switch screens by mistake. Therefore, all data entry fields have been set to the highest precision of any screen that	1.24.8

	they appear in. This has also solved the problem that the range for AFP values in the 1st Trimester Biochemistry screen has been too little. Ranges will be implemented differently in future versions.	
AST-4351	It is now possible to search for a specific examination in the Patient Lookup window by means of Visit Number and Order Id/Accession number. This can be configured via a property, Please contact support@astraia.com for help.	1.24.9
AST-4639	In the SIEOG specific part the brackets saying "Clinical evaluation" indicated the period of clinical evaluation. The period of clinical evaluation has been completed and the label has been removed.	1.24.10
AST-4569	After the biochemistry MoM values are adjusted (using the First trimester Audit), the corresponding traffic lights do not turn green instantly. Only after enough data with adjusted measurements has been collected will they turn green, provided the measured data fulfills the necessary criteria. This behaviour works as designed, but it was unclear to some users. A new info button has been added on the Biochemistry screen to better explain this behaviour.	1.24.10
AST-4409	Two new fields allow recording the end date and time of a visit. These fields are only available when the Examination screen is configured to display the 'Patient Visit Information RIS' fields.	1.24.10

6.11 Printouts / Reports

AST-1448	In Ultrasound --> Biometry / Anatomy, the printout for findings in Detailed Anatomy --> Heart have been improved. It is now clearly recognizable whether the findings relate to 4-chamber view, outflow tract or 3-vessel.	1.24.0
AST-1449	It is now possible to add bullet-point lists to the reporter texts.	1.24.0
AST-1675	The pie chart "Risk of premature delivery" from the cervical assessment screen can now be included in the printouts.	1.24.0
AST-1758	The values for Doppler of the Uterine artery have been separated from the fetus in the printouts. For pregnancies with multiple fetuses, the values appear only once in the printout now.	1.24.0
AST-1880	In the Gynaecology module, the printout for the risk of malignancy of adnexal masses has been improved. The risk classifications are now printed in bold to stand out more from the references.	1.24.4
AST-1946	In printouts of Obstetric History, the symbols for week (w) and day (d) change now according to the selected language.	1.24.0

AST-2003	When sending a report via e-mail, the last e-mail address used as sender by the user is saved. It will only be used if the user has no e-mail address in the user description, though. Otherwise, the e-mail address from the user description will be used.	1.24.0
AST-2024	Reports can now be printed in several formats by adding a page size to the report template. Current available values are Letter, Legal, A4 and A5. Example: <code><printout title="Ad hoc letter" pagesize="A5" ></code>	1.24.0
AST-2142	Sending sensitive patient data via e-mail must be done in a secure way (e.g. using encryption). If a report is about to be sent via e-mail, a warning message asks the user to make sure the e-mail configuration complies with the local security requirements.	1.24.0
AST-2556	Report templates can now contain underlined text.	1.24.0
AST-2557	The error message that appears when a report file is erroneous has been improved to better indicate where the error is.	1.24.0
AST-2756	User defined variables in the reporter (ad hoc letters, conclusions) that include database fields referenced in the fetus A / fetus B tabs (in case of twin pregnancies) are now displayed in a comma-separated list of values.	1.24.2
AST-3273	With the function "user_fullname()" It is now possible to put full user names on a printout. user_fullname() without arguments will return the full name of the currently logged in user, if given. user_fullname() accepts also database columns as arguments, so expressions like this can be put in reports: <code><t>validated by: </t><data>user_fullname(Exam.Validated_by)</data></code> . The function always returns the full name if given, and the user name if not.	1.24.5
AST-3596	For custom printouts, there are improvements and new features regarding loops and growth bars. Loops have a new, optional attribute 'max', to determine the maximum number of records to loop over, e.g., <code><loop table="Fetus" delimiter="no" max="3"></code> . The handling of growth bars has been improved so that they are correctly displayed in line, to the right side of the label.	1.24.5
AST-3662	It is now possible to suppress printing the risk for T21 in a printout.	1.24.5
AST-3770	There were problems with the PDF export of reports when the filename contained the report name, and the xml template for the report was in subfolder. This has been fixed.	1.24.6
AST-3927	Volumetric values (length x width x height) from the Cortical anomalies section are now printed in one line on reports instead of being separated by a new line.	1.24.6
AST-4559	The Episode Code (only used in Portugal) is now available as a variable for the automatic naming of PDF printout files.	1.24.10

6.12 Command Line Interface

AST-2701	A new command line option "-saveAndExit" saves all open patients and closes every running instance of astraia. This is useful e.g., in larger installations, when the fast user switch from windows is used and licenses would be blocked by running but unused instances of astraia.	1.24.0
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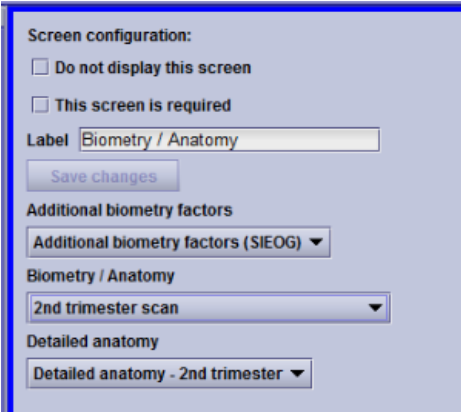
6.13 Options

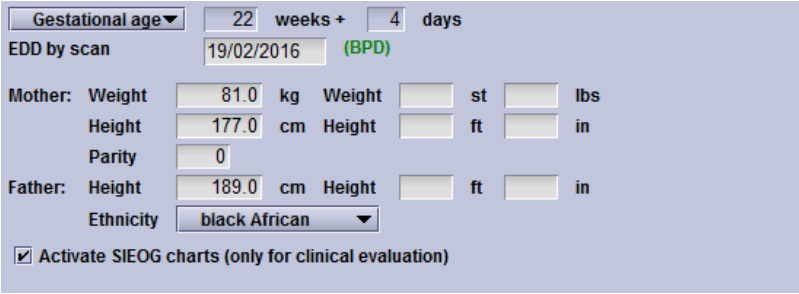
AST-1721	Changes in properties do now show up in the audit trail, under the type "Settings".	1.24.0
AST-3542	Font size can now be set up to +5 in Options - Appearance.	1.24.5

6.13.1 Charts

AST-1439	For BPD, OFD and Corpus Callosum: Tilea et al.: <i>Cerebral biometry in fetal magnetic resonance imaging: new reference data.</i> Ultrasound Obstet Gynecol 2009; 33(2): 173-181	1.24.1
AST-2078	For CRL, BPD, AC, FL, HC: Leung et al.: <i>Fetal biometry in ethnic Chinese: biparietal diameter, head circumference, abdominal circumference and femur length.</i> Ultrasound Obstet Gynecol 2008; 31(3): 321-327	1.24.0
AST-2359	For Yolk Sac Diameter and GSD: Papaioannou et al.: <i>Normal Ranges of Embryonic Length, Embryonic Heart Rate, Gestational Sac Diameter and Yolk Sac Diameter at 6-10 Weeks.</i> Fetal Diagn Ther 2010; 28(4): 207-219	1.24.0
AST-2883	For Birthweight: Skjærven et al.: <i>Birthweight by gestational age in Norway.</i> Acta Obstet Gynecol Scand 2000; 79: 440-449 For Umbilical artery doppler indices: Acharya et al.: <i>Reference ranges for serial measurements of umbilical artery Doppler indices in the second half of pregnancy.</i> Am J Obstet Gynecol 2005; 192(3): 937-944 For Uterine Artery Doppler: Flo et al.: <i>A new non-invasive method for measuring uterine vascular resistance and its relationship to uterine artery Doppler indices: a longitudinal study.</i> Ultrasound Obstet Gynecol 2011; 37: 538-542	1.24.0
AST-3032	For Gestational Age by HC: Johnsen et al.: <i>Fetal age assessment based on ultrasound head biometry and the effect of maternal and fetal factors.</i> Acta Obstet Gynecol Scand 2004; 83: 716-72; For HC and AC: Johnsen et al.: Longitudinal reference charts for	1.24.2

	<p>growth of the fetal head, abdomen and femur. European Journal of Obstetrics & Gynecology and Reproductive Biology 127 (2006) 172-185;</p> <p>For EFW: Combs et al.: <i>Sonographic estimation of fetal weight based on a model of fetal volume.</i> Obstet Gynecol. 1993; 82(3): 365-70;</p> <p>For EFW: Johnsen et al.: <i>Longitudinal reference ranges for estimated fetal weight.</i> Acta Obstetrica et Gynecologica 2006; 85: 286-297;</p> <p>For Gestational Age by FL: Johnsen et al.: <i>Fetal age assessment based on femur length at 10-25 weeks of gestation, and reference ranges for femur length to head circumference ratios.</i> Acta Obstet Gynecol Scand 2005; 84: 725-733</p>	
AST-3065	<p>In Options / Charts, a new tab has been added for dating methods. CRL defaults to Robinson formula. Others default to the selected growth chart. New methods have been added for HC and FL, from Chitty and Johnsen. These agree very well with the Snijders charts except for gestational ages 13-15 weeks. All dating methods from Loughna et al.: <i>Fetal size and dating: charts recommended for clinical obstetric practice.</i> Ultrasound 2009;17(3):161-167.</p>	1.24.2
AST-3450	<p>For BPD, HC, AC, and FL in dichorionic diamniotic (DCDA) and monochorionic diamniotic (MCDA) twin pregnancies: Stirrup et al.: <i>Fetal growth reference ranges in twin pregnancy: analysis of the Southwest Thames Obstetric Research Collaborative (STORK) multiple pregnancy cohort.</i> Ultrasound Obstet Gynecol 2014 Jul 23. doi: 10.1002/uog.14640. [Epub ahead of print]</p>	1.24.5
AST-3538	<p>For Gestational Age by CRL: Papageorghiou et al.: <i>International Fetal and Newborn Growth Consortium for the 21st Century (INTERGROWTH-21st): International standards for early fetal size and pregnancy dating based on ultrasound measurement of crown-rump length in the first trimester.</i> Ultrasound Obstet Gynecol 2014 Jul 8. doi: 10.1002/uog.13448. [Epub ahead of print]</p>	1.24.5
AST-3562	<p>For BPD, OFD, HC, AC, FL: Papageorghiou et al.: <i>International Fetal and Newborn Growth Consortium for the 21st Century (INTERGROWTH-21st): International standards for fetal growth based on serial ultrasound measurements: the Fetal Growth Longitudinal Study of the INTERGROWTH-21st Project.</i> Lancet 2014; 384(9946): 869-879</p>	1.24.5
AST-3571	<p>For birthweight, birth length, birth HC for boys and girls respectively: Villar et al.: <i>International Fetal and Newborn Growth Consortium for the 21st Century (INTERGROWTH-21st): International standards for newborn weight, length, and head circumference by gestational age and sex: the Newborn Cross-Sectional Study of the INTERGROWTH-21st Project.</i> Lancet 2014; 384(9946): 857-868</p>	1.24.5
AST-3676	<p>For cervical length 20-34 weeks: Silva et al.: <i>Reference ranges for</i></p>	1.24.6

	cervical length by transvaginal scan in singleton pregnancies. J Matern Fetal Neonatal Med. 2010 May;23(5):379-82. doi: 10.3109/14767050903177169.	
AST-3851	For Estimated Fetal Weight: Williams et al.: Fetal growth and perinatal viability in California. Obstet Gynecol. 1982 May;59(5):624-32.	1.24.6
AST-3859	For Estimated Fetal Weight: Hadlock et al.: In utero analysis of fetal growth: a sonographic weight standard. Radiology 1991; 181:129-133.	1.24.6
AST-3860	For BPD, HC, FL, AC: Hadlock et al.: Computer-assisted analysis of multiple fetal growth parameters. Radiology 1984;152:497-501.	1.24.6
AST-3955	For MCA cerebro-placental ratio (CPR): Morales-Roselló J, Khalil A, Morlando M, Hervás-Marín D, Perales-Marín A: Doppler reference values of the fetal vertebral and middle cerebral arteries, at 19-41 weeks gestation. J Matern Fetal Neonatal Med. 2015; 28(3):338-43.	1.24.8
AST-3860	For BPD, HC, FL, AC: Hadlock et al.: Computer-assisted analysis of multiple fetal growth parameters. Radiology 1984;152:497-501.	1.24.6
AST-3955	For MCA cerebro-placental ratio (CPR): Morales-Roselló J, Khalil A, Morlando M, Hervás-Marín D, Perales-Marín A: Doppler reference values of the fetal vertebral and middle cerebral arteries, at 19-41 weeks gestation. J Matern Fetal Neonatal Med. 2015; 28(3):338-43.	1.24.8
AST-4109, AST-4343	For Biometry / Anatomy, a new alternative screen is available under the option "Additional Biometry factors (SIEOG)". If this screen is selected, new fields appear on the Biometry / Anatomy screen relating to biometric data of the parents. When these fields are filled, new customized charts for BPD, HC, AC, and FL become available. Those charts are generated from the parents' biometric data and activated when the check box "Activate SIEOG charts (Clinical evaluation)" is ticked. Please note that the charts are only for clinical evaluation. When the check box is unticked, the standard charts (selected in Options --> Charts) are active. Please see also Release note for AST-4639.	1.24.9
		

	 <p>For BPD, HC, FL, AC: Ghi et al (SIEOG working group on Fetal Biometric Charts): Customized Fetal Growth Charts for Parents' Characteristics, Race, and Parity by Quantile Regression Analysis: A Cross-sectional Multicenter Italian Study. J Ultrasound Med 2015 Dec 7. pii: 15.03003. [Epub ahead of print].</p>	
MSH-124	For sex-specific estimated birth weight: Kramer et al.: <i>A New and Improved Population-Based Canadian Reference for Birth Weight for Gestational Age.</i> Pediatrics 2001; 108(2): E35.	1.24.0
AST-4634	The paper by the SIEOG working group on Fetal Biometric Charts, previously published as an Epub ahead of print and included in astraia 1.24.9, has now gone into print. The reference has been updated to: Ghi et al. (SIEOG working group on Fetal Biometric Charts) J Ultrasound Med 2016; 35: 83-92.	1.24.10
AST-4544	In Options - Charts - Dating - HC a reference has been changed to specify better the origin of the GA calculation: It used to say "Calculation (Chitty et al. Br J Obstet Gynaecol 1994; 101: 35-43)". Now it has been changed to "Calculation (Altmann & Chitty formula, Loughna et al. Ultrasound 2009; 17: 161-167)" to make clearer that the formula in its form has been taken from "Loughna , Chitty L, Evans T, Chudleigh T: Fetal size and dating: charts recommended for clinical obstetric practice. Ultrasound 2009; 17(3): 161-167". But Loughna actually used the formula from "Altman et al. Ultrasound Obstet Gynecol 1997; 10: 174-191" which is based on the data from " Chitty et al. Br J Obstet Gynaecol 1994; 101: 35-43".	1.24.10
AST-4283	For Middle Cerebral PI and Middle Cerebral Vmax: Morales-Roselló et al.: <i>Doppler reference values of the fetal vertebral and middle cerebral arteries, at 19–41 weeks gestation.</i> J Matern Fetal Neonatal Med 2015; 28(3): 338-343.	1.24.10
AST-3843	For Gestational Age by CRL (in Options - Charts - Dating - CRL): Daya : <i>Accuracy of gestational age estimated by means of fetal crown-rump length measurement.</i> Am J Obstet Gynecol 1993; 168 (3 Pt 1): 903-908. This is the early pregnancy dating chart that is used for dating within the IPS screening program.	1.24.10
AST-4832	The CRL chart by (Loughna et al. Ultrasound 2009; 17: 161-167) is a dating chart (meaning the gestational age is on the y-axis) and must	1.24.10

	not be selected as growth chart. A note has been added to the corresponding entry in Options -> Charts to warn the user about this.	
AST-4414	For Ductus Venosus PI: Kessler et al. <i>Longitudinal reference ranges for ductus venosus flow velocities and waveform indices.</i> Ultrasound Obstet Gynecol 2006; 28(7): 890-898.	1.24.10
AST-4826	A note has been added to the "CRL early" chart (Papaioannou et al. Fetal Diagn Ther 2010; 28: 207-219) to warn users that the chart will override any selected CRL dating method in the range CRL <= 36 mm except when using a growth chart.	1.24.10
AST-4729	For Middle Cerebral Artery PI: Ebbing et al. <i>Middle cerebral artery blood flow velocities and pulsatility index and the cerebroplacental pulsatility ratio: longitudinal reference ranges and terms for serial measurements.</i> Ultrasound Obstet Gynecol 2007; 30(3): 287-296.	1.24.10
AST-3889	For CPR: Ebbing C et al.: <i>Middle cerebral artery blood flow velocities and pulsatility index and the cerebroplacental pulsatility ratio: longitudinal reference ranges and terms for serial measurements.</i> Ultrasound Obstet Gynecol 2007; 30(3): 287-296.	1.24.10

6.13.2 Administrator

AST-4130	It is not possible to deactivate the Audit Trail anymore. All Audit Trail specific options have been removed from Options -> Administrator.	1.24.8
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6.13.3 Printouts

AST-1502	In the options for PDF printouts and e-mails, the variable %DATE% was added to the help popup. It can be used to generate a PDF file name or an e-mail subject.	1.24.0
AST-1508	Users can now select a colour for the headings in the printout, go to Options - Printout - Colour of the headings.	1.24.0
AST-2802	In the options for PDF printouts and e-mails, the variables %EXAMDATE% and %EXAMTIME% were added to the help popup. they can be used to generate a PDF file name or an e-mail subject.	1.24.2

6.13.4 Users

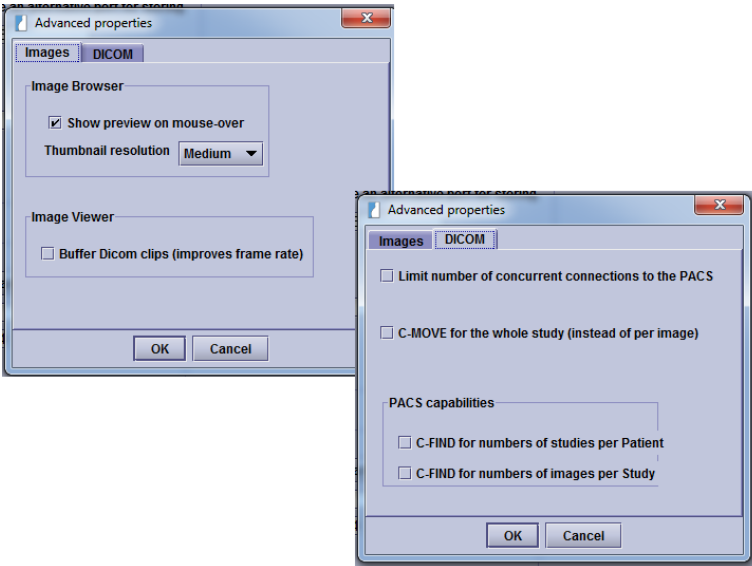
AST-2089	The user configuration contains now a field for the full name. User menu,	1.24.0
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	License Warning, Reminders and Validation will show the full names, instead of the user name, when available.	
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6.13.5 Workstation

AST-2288	Measurement Data transfer from the astraia measurement server can now be configured automatically for all workstations. In the tab Options -> Workstation, click "configure for all workstations" and the setting will automatically transferred also to new astraia workstations.	1.24.8
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6.13.6 Imaging / Worklist

AST-2525	The different input fields in the Image module options dialog are visually grouped to improve usability.	1.24.1
AST-2621	<p>An advanced options dialogue has been added:</p>  <ol style="list-style-type: none"> 1. Images <ol style="list-style-type: none"> a. <i>Thumbnail resolution</i>: This is the size of the thumbnail in the database. Small will be 80px width, Medium 160px width, and Large 240px. Changing this option will not be applied on previously stored images and unexpected look and feel results can occur. It is recommended to change this on installation time (when no images are stored yet). b. <i>Show preview on mouse-over</i>: When an image is fully loaded in memory (i.e., it has been opened in the current session before), resting the mouse for a short amount of time on an image will bring up a preview frame of 500px width, with a preview of the image. 	1.24.1

	<p>c. <i>Buffer DICOM clips</i>: DICOM clips are meant to be played at a specific frame rate. Achieving this frame rate sometimes can be difficult because there is not enough CPU time to load and render the image between frames. This option will process and compress all the images in memory, so we can reach the specific frame rate later on. The images cached in memory are handled in the Images Memory Manager and it will be one of the first type of items to be swapped out on memory need. If there is not enough memory free, it will not buffer anything, and the clips will be played as in astraia version 1.23 with a slower frame-rate.</p> <p>2. DICOM</p> <p>a. <i>Limit number of concurrent connections to the PACS</i>: Some PACS have special licenses that limit the number of connections. This is why astraia taking all the channels of the PACS momentarily can block the PACS to other applications in the hospital. This is to be set to a safe value (2 or 3), or to be negotiated with the hospital. The more concurrent connections, the faster loading the images will be.</p> <p>b. <i>C-MOVE for the whole study (instead of per image)</i>: When there are no images at all in the database for a specific patient, astraia can perform a C-MOVE as per study, which is less network overhead, but in some PACS this implies to use only one channel to send one by one (this can be desirable as it is less load for the PACS, but also slower).</p> <p>c. <i>PACS capabilities</i>: astraia will sort this out automatically on every session, but if you know what capabilities the PACS supports, you can specify it here.</p>	
ASTWS-39	<p>A new property System.Worklist.DeleteAfterMinutes allows to configure the worklist to delete patients from the worklist already after e.g. 30 minutes, whereas in earlier versions the minimum values was an hour. Please contact the astraia support (support@astraia.com) if you want to customize this setting.</p>	1.24.6
ASTWS-36	<p>A new mapping for Portuguese characters to be transmitted from astraia to the Ultrasound machine via the worklist has been implemented. This fixes problems with Mindray US machines.</p>	1.24.8
ASTWS-42	<p>The Accession number which is sent to the worklist can be configured to carry a prefix. It is now possible to not only have one global prefix, but to also configure a case-specific prefix, e.g. one for Obstetric cases and a different one for Gynaecology cases.</p>	1.24.10

6.13.7 Languages

AST-2781	Unreleased languages are now clearly marked in the Options menu. Switching to an unreleased language is only possible for testing and translation purposes. It results in the program being marked as "Unreleased language: not for clinical use". When switching to an unreleased language, a pop-up warns: "The translation of the astraia program for this language has not been officially released - not for clinical use."	1.24.1
AST-4758	The Greek translation of the following lab tests has been improved: "AST" = "AST (sGOT)", "GOT" = "ALT (sGPT)", "GGT" = "γGT", "Albumin" = "Αλβουμίνη", "Protein" = "Ολικά λευκώματα".	1.24.10

6.14 Installation

ASTWINST-71	The recommended amount of RAM when using the Image module was raised from 512 MB to 1024 MB. The installation program was adjusted accordingly.	1.24.4
ASTWINST-82	When the installation process detects a Sybase database, it performs automatically an update to the newest Sybase version.	1.24.7

7 Bug Fixes

7.1 Summary Screen

AST-1827	Deletion of a procedure in the 'Accounts' screen, after having validated that examination, does now register as a change in the examination. In the summary screen, the "modified by" message is now shown.	1.24.0
AST-4408	In version 1.24.8, if a user made changes to a validated examination, the message that the examination was modified after validation was not retained on the summary screen after closing and reopening the patient file. This has been fixed.	1.24.8 P1

7.2 Pregnancy

AST-1528	In the Biometry / Anatomy screen, the Persson formula for the estimated fetal weight (EFW) was calculated using the transversal	1.24.0
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	abdominal diameter (TAD) instead of the mean abdominal diameter. This has been corrected. The Persson formula now calculates automatically the arithmetic mean of TAD and APAD (A-P abdominal diameter) and uses this value to calculate the EFW. (NEW)	
AST-2144	In the screen 'Conclusions', for the reporter variable 'gestation', "weeks" and "days" are now translated correctly to Italian.	1.24.0
AST-2356	In version 1.23, the risk for preterm delivery in Examination --> Ultrasound --> Cervical assessment could be calculated outside the gestational age range of 20-26 weeks. This has been fixed.	1.24.0
AST-2449	A wrong input error message in Investigations--> Fetal--> Amniotic fluid has been fixed.	1.24.0
AST-3082	In Obstetrics --> Fetal assessment --> Fetal heart rate, the field for Time was a text-field and has been changed to a time-field.	1.24.2
AST-3083	Growth retardation appeared twice in different lists in Indication --> Fetus. One entry has been removed.	1.24.2
AST-3183	In Obstetric --> Counselling, the summary was not printing when the fields Counselling.Details or Counselling.Indication have been filled. This has been fixed.	1.24.4
AST-3436	In the 2nd trimester risk assessment, it is now possible to adjust for Biochemistry even without any 1st trimester screening.	1.24.4
AST-3511	The risk for preterm delivery in Examination --> Ultrasound --> Cervical assessment could be calculated for pregnancies with multiples, although the literature covers only singleton pregnancies. This has been corrected .	1.24.4
AST-3766	The Polish translation for the label "Cortical anomalies" was incorrectly set to "Wady nerek". This has been fixed and set to "Nieprawidłowości kory mózgowej".	1.24.5
AST-3552	The field 'Live fetuses after procedure' on the screen Procedure - ER/Fetocide did not accept the value 0 (zero). This has been fixed.	1.24.5
AST-3653	The group permission 'Can modify all lookup records' was not respected for all lookup tables. This has been fixed for the fetal echocardiography diagnosis.	1.24.5
AST-3595	In version 1.24.3 there was a character restriction on the field "Sample Number" in First Trimester - Biochemistry. Special characters like "/" or "*" could not be entered. This restriction has been lifted in 1.24.5.	1.24.5

AST-3844, AST-4065	The field Cervical length on the screen Cervical assessment can now be filled with the value 0 which is meaningful to predict imminent delivery.	1.24.7
AST-3857	The screen Placenta Outcome was not working correctly: When clicking on the New Placenta tab, the focus just went to that tab rather than adding an actual new placenta. This has been fixed.	1.24.6
AST-3941	In Swedish and Danish installations, estimated fetal weight (EFW) comes with the percentage by which the current fetus' weight differs from the median, not the centile value. This means that in this case, negative values are allowed. A bug caused astraia to not display a negative percentage (indicating growth inhibition) on the screen or reports. This has been fixed.	1.24.6
AST-4038	In the Screen "Fetal Assessment --> Biophysical Profile", total scores have been calculated even if not all fields have been filled in. This has been fixed. An additional problem with the printout of the BPP in the alternative screen BPF - MSH has also been corrected.	1.24.7_7125
AST-4096	In the tab "Heart" in the Biometry/Anatomy screen, there are 3 check boxes for normal entries: 1) normal 4-chamber view, 2) normal outflow tracts, 3) normal 3-vessel view. The tab turned green when the first two have been selected although it should turn green only when all three are selected, This has been fixed.	1.24.7
AST-4115	If, for a measurement, a chart has been selected that produces a centile, and afterwards the chart has been changed to one without centiles implemented, the correspondig data field has not been cleared. This has been fixed.	1.24.8
AST-4120	Under some circumstances the GA in the history screen could differ from the correct GA in the examination screen. This has been corrected.	1.24.8
AST-4386	In version 1.24.8, the GA was not retained after the user has entered the maternal assessment screen. This has been fixed.	1.24.8 P1
AST-4385	In version 1.24.7, under certain specific circumstances, it could happen that in the field Ductus Venosus on the First Trimester Screen the values entered were rounded from two decimals to one decimal, or that the two decimals were retained. The resulting risk could be slightly different, but not in an order of magnitude to have a diagnostic impact. This has been fixed and the field retains now always the two decimals.	1.24.9
AST-4394	From version 1.24.2 on, the amniotic fluid index on the Biometry/Anatomy screen was not calculated anymore when one of the values was 0. Users had to enter a 0.1 as workaround. This	1.24.9

	has been fixed, 0 can be entered in any of the four pool fields, and AFI as well as deepest pool are calculated correctly.	
AST-4820	The field and entries of Congenital abnormalities of the newborn child are documented in the screen Outcome -> Neonatal Period. This information was shown redundantly in the screen Outcome -> Placenta Outcome. This has been fixed.	1.24.10
AST-4776	There was a typo in the info screen (i-button) about CRL saying 'affect' instead of 'effect'. This has been fixed.	1.24.10
AST-4773	When selecting 'CRL' as the dating method using the field Dates on the History screen, the CRL field's unit was not displayed. This has been fixed. The CRL field now carries 'mm' as its unit.	1.24.10
AST-3973	On the screen Outcome -> Placenta Outcome, the fields 'Placenta' and 'Weight' could only be entered on a per-pregnancy basis. This means that in the case of pregnancies with multiple placentas, the values could be entered for only one of the placentas. This has been fixed.	1.24.10
AST-4792	The cutoff for PE based on the combination of PAPP-A, PIGF and Uterine Artery PI or the combination of PAPP-A, Uterine Artery PI and MAP or the combination of PAPP-A, PIGF, Uterine Artery PI and MAP is 200. Yet, the cutoff was made visible via bold characters only at 150. This has been fixed.	1.24.10

7.3 Charts

AST-3587	The axis description for the chart for estimated fetal weight (EFW) by GA based on Johnsen et al. (Acta Obstetricia et Gynecologica. 2006) was misleading and has been improved.	1.24.5
AST-4759	For Ductus Venosus PIV, two charts were selected by default when actually, they should be mutually exclusive. This has been fixed. Now the chart Parra-Cordero et al. Prenat. Diagn 2007; 27: 1251-1257 is the default chart.	1.24.10

7.4 Gynaecology

AST-2567	Two errors in the Simple Rules Classification algorithm for solid and irregular tumours have been fixed: Rule M1 now applies correctly only to irregular purely solid tumours, and not to unilocular-solid or multilocular-solid tumours as before. Rule B4 now applies correctly only to multilocular tumours not containing any solid component.	1.24.0
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AST-2579	Maximum input limitation on "R uterine artery" has been changed to 9.99, the same value as with "L uterine artery".	1.24.0
AST-3248	Putting a menopausal age in history gynaecology did block examinations before that age, unless the patient file was closed and reopened again. This has been fixed.	1.24.3

7.5 Reminders

AST-3253	In Reminders --> Options, The "Edit action" button was always disabled. This has been fixed.	1.24.4
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7.6 Diary

AST-1426	When an appointment was made, astraia suggested a GA on appointment day based on a previous pregnancy, even if the result of this first pregnancy (termination or preterm delivery) is filled in. This has been fixed.	1.24.0
AST-2308	In the appointment dialog, the number of fetuses was not shown when the field "EDD by US" was not filled previously. This has been fixed.	1.24.0
AST-3132	Entering a location with unusual characters like "(", or ")" in the Diary could cause problems like the loss of the appointment. This has been fixed so that no data is lost anymore.	1.24.2
AST-3592, AST-3588	When entering a new patient's data in the Diary, clicking on the field for hospital ID and leaving that field again without entering an ID, the rest of the fields became disabled. This has been fixed.	1.24.5
AST-3856	The tooltip for Indication did not show up in the diary anymore. This has been fixed.	1.24.8
AST-3862	When booking a patient from a diary's appointment, that patient's examination date is now set to the appointment's date, not the current date. This also fixes some problems with related HL7 functionality.	1.24.6
AST-4084	There was a problem with Chinese fonts in the diary; when a short appointment was displayed in Chinese, the font was too small to be readable. This has been fixed.	1.24.8
AST-4622	The font that is used for appointment entries in the Diary's calendar was not bold anymore in astraia version 1.24.9. This has been fixed; it is now bold again.	1.24.10
AST-4571	Having booked a patient in the Diary where a space character was accidentally entered as the hospital number led to a problem with	1.24.10

	<p>subsequent appointments.</p> <p>Deleting an existing hospital number of a subsequent appointment did not work. After reopening the appointment, the deleted hospital number was entered again. This has been fixed.</p>	
AST-4551	<p>When having booked a patient in the Diary where a space character was accidentally entered as the hospital number, creating appointments for subsequent patients without a hospital number failed. An error message informed the user that the (empty) hospital number already existed. This has been fixed.</p>	1.24.10

7.7 Patient Data

AST-1703	<p>Astraia tried to give the same patient ID to 2 new patients if more than 10 patients were booked without saving any of them in the meantime, which then resulted in a database error. This limit has now been increased to 30 patients. Please save in between.</p>	1.24.0
AST-4696	<p>The anonymization of patient data has been extended to anonymize more fields.</p>	1.24.10
AST-4124	<p>When deleting a case, the final confirmation dialog that is displayed when the deletion is induced was not working correctly. Cancelling it lead to the deletion of the case. This has been fixed.</p>	1.24.10

7.8 Patient Lookup

AST-4575	<p>When using the Enter key to open a patient in the Patient Lookup dialog, the wrong patient could be opened in the following situation: there was more than one patient in the list and the user then explicitly (with mouse or keyboard) selected one of the entries before pressing Enter. This has been fixed.</p>	1.24.9 P1
AST-3266	<p>When entering a patient ID in the patient lookup field and clearing the field again, the list of patients shown should be empty again which was not the case in some 1.24 versions. This has been fixed.</p>	1.24.5
AST-4575	<p>When using the Enter key to open a patient in the Patient Lookup dialog, the wrong patient could be opened under the combination of the following circumstances: there was more than one patient in the list and the user then explicitly (with mouse or keyboard) selected one of the entries before pressing Enter. This has been fixed.</p>	1.24.10

7.9 User Interface

AST-1517	In helper lists, automatic capitalization of entries was broken and is now fixed	1.24.0
AST-1859	The spell checker sometimes caused astraia to freeze when a long and unusual word has been entered. This has been fixed.	1.24.0
AST-2295	In screen configuration, positioning of user defined fields works correctly again.	1.24.0/ 1.24.2
AST-2467	The patient frames now remember size and position correctly, also when opened from the Query module.	1.24.0
AST-3089	Switching tabs inside screens could be very slow. This has been significantly improved.	1.24.2
AST-3342	There was a problem with user-defined number fields where data would disappear when entered the first time. This has been fixed.	1.24.4
AST-3618	In previous versions of 1.24 when selecting a different font size in the Reporter and hitting the Return key to start a new line, the font size was set back to the old value. This has been fixed.	1.24.5
AST-3650	When using a customized date format, this date format was not used in Reporter variables. This has been fixed. Please contact the astraia support (support@astraia.com) if you want to use a customized date format.	1.24.5
AST-3664	The date format in the Reporter is now consistent with the date format on the screens.	1.24.5
AST-953	When adding a new entry to a list, hiding it and adding another entry, the two entries got the same ID which must not happen. This has been fixed.	1.24.5
AST-3457	When a user tries to close a patient while images are imported, the user is now asked to confirm that the import of images will be cancelled.	1.24.5
AST-3563, AST-3415	When trying to close a patient without having saved changed data, a dialog appears asking the user if the changes should be saved. Pressing the 'Esc' key or clicking on the close button in the top right corner of the dialog was equal to clicking on 'No' in the dialog which closed the patient without saving data. This behaviour could cause data loss. The problem has been fixed; pressing 'Esc' or clicking on the Close button behaves like clicking on the Cancel button.	1.24.5
AST-3565	The feature allowing a user to drag and drop variables from one folder	1.24.5

	to another in the Reporter (available on several screens) was not working. This has been fixed.	
AST-3749	In 1.24.4, the mutually exclusive navigator tabs in the Ultrasound menu did not become bold anymore when clicked on. The user had to change data entries on the new (desired) screen when he wanted the tab to become bold, e.g. because an examination that has been conducted in the Biometry/Anatomy screen was in reality a Growth Scan. This behaviour has been changed back to the former one and a tab becomes bold when clicked on.	1.24.8
AST-3865	When clicking on the field pre-eclampsia on the Outcome screen's configuration, a list was offered in the bar on the right for manual configuration which is not applicable for checkboxes. This has been fixed.	1.24.6
AST-3977	In the module Obstetrics 'Early Pregnancy', 'First Trimester', 'Biometry / Anatomy', and 'Growth scan' are mutually exclusive screens. It is intended that only one of them can be filled per examination. As a result, only one of these screens will be bold when data is entered. However, the behaviour in 1.24 versions was different than in earlier versions: When switching from one of the mutually exclusive screens to another, the original screen's name in the Navigator changes from bold to regular font. When going back to that original screen, the screen name used to go back to bold in 1.23, but didn't in 1.24. This has been restored to the old behaviour.	1.24.6
AST-3988	When the user enters data on one screen (e.g. Biometry/ Anatomy), clicks on another screen with mandatory fields and tried to leave this second screen without entering data, a popup appears that asks to enter the necessary data. Astraia was having an issue that, after the user entered the required data and left the second screen, the first screen did not appear bold anymore in the navigator, and the printout would not show the information on this screen. This has been fixed.	1.24.6
AST-4055, AST-4054	Some reporter fields have erroneously be restricted to 4000 characters instead of unlimited size. With Oracle DBs, some rarely used reporter fields were entirely unusable because if a type mismatch. This has been fixed.	1.24.8
AST-4118	User defined fields in the Account screen have been hidden after updating from 1.23 versions to 1.24. This has been fixed.	1.24.8
AST-4127	In some cases, the Conclusions screen did not stay bold although data was entered, and the conclusions were not printed in the complete report. This has been resolved.	1.24.8
AST-4407	In an open patient screen, the F3 key can be used to bring the focus to the navigator. Then the user can use the arrow keys to navigate to	1.24.9

	different entries in the navigator, and the enter key to select the screen. This was broken in version 1.24.8, and has been fixed now.	
AST-4612	The symbol '>' did not show correctly in MSSQL and appeared as '?'. This has been fixed and appears now always as '>='.	1.24.10
AST-4359	After updating to astraia from 1.24.7 or earlier, a problem with the GP field (General practitioner) could occur. In patients where the GP field was filled with a hidden entry, opening the list of GPs would result in only the hidden entry to be displayed. Other existing GPs could only be seen using a workaround. This has been fixed.	1.24.10
AST-4334	When copying rich text (as can be entered on the Conclusions screen, for example) from astraia into an RTF editor, some formatting information was lost. This could cause the text to look different or to be less readable. This has been fixed.	1.24.10
AST-4198	When pressing Enter at the beginning of a Reporter field (such as on the Conclusions screen), subsequent text changes could remain invisible. Closing and reopening the patient displayed the full correct text including previously invisible changes. The bug has been fixed; after pressing Enter, all subsequent text changes are visible as expected.	1.24.10

7.10 Image Browser

AST-840	Optional points in the DICOM standard are handled more flexible. This makes the PACS communication more stable.	1.24.2
AST-1641	Instance availability was not taken into account in queries to the PACS, resulting in a failed C-MOVE. Now, images with an Instance availability "OFFLINE" are not reported as a result of a C-FIND.	1.24.2
AST-1734	When all examinations are selected, it is now more obvious to which thumbnail the date belongs.	1.24.1
AST-2428	Astraia was not compatible to relational PACS. This has been fixed.	1.24.2
AST-2580	The order of the images in the image browser could under certain circumstances appear random, or change when patients have been closed and reopened. This has been fixed.	1.24.1
AST-3345	When switching from 'All images' to an examination's images in the ImageBrowser, it could happen that the thumbnails were displayed incorrectly. This has been fixed.	1.24.4
AST-3479	A refresh problem caused that not all thumbnails for a patient / case	1.24.5

	showed up in the image browser under certain circumstances. This has been fixed.	
AST-3631	In previous versions of 1.24 using the mouse wheel to scroll the list of images in the Image Browser only worked on the scrollbar on the right, not on the main area which contains the images. This has been changed back to the behaviour of 1.23 so now the entire area can be used for scrolling.	1.24.5
AST-3459	When there was an error trying to load images in the Image Browser (e.g. because the remote PACS was not responding), the 'Import' button was still enabled seemingly making it possible to import images. The button is now disabled in situations when importing images is not possible.	1.24.5
AST-3479	A refresh problem caused that not all thumbnails for a patient / case showed up in the image browser under certain circumstances. This has been fixed.	1.24.5
AST-3499	When one case shared images with a different case and the user switched from one case to the other (using 'Data' -> 'Change case'), the Image Browser combobox still displayed the exam dates of the first case rather than the new case's. It did not update properly. This has been fixed.	1.24.5
AST-3619	Images with a faulty entry in the database that could be loaded in 1.23 versions of astraia could not be loaded in 1.24 anymore. This has been changed to match the old behaviour.	1.24.5
AST-3640, AST-3627, AST-3629	In previous versions of 1.24 with many patients and their images opened at the same time, it could happen that not all images were loaded and astraia froze. This has been fixed.	1.24.5
AST-3644, AST-3355	In previous versions of 1.24 when several patients with many images each were opened, astraia could run out of memory and freeze. This has been fixed.	1.24.5
AST-3832	When using the auto-import feature for images, the setting for scanning manually (requiring the user to click on a button in order for the scanning to occur) was not respected; scanning was always done automatically. This has been corrected.	1.24.6
AST-3840	Deselecting images in the Image Browser by clicking on an empty area did not work anymore in 1.24.5. This has been fixed.	1.24.6
ASTIS-133	When updating from a 1.23.x version to 1.24.5 using an Oracle database, the option to forward C-FIND queries from the Image Server to a PACS was enabled by default, but should have been disabled. This could cause the Image Server setup to not function as expected and has been fixed.	1.24.8

ASTIS-157	Calling AET has always been greyed out in astraia Options --> Imaging --> Generic Dicom. This has been fixed.	1.24.8
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7.11 Image Viewer

AST-1301	Special characters in annotations (äüöß, etc.) are now shown correctly after closing and reopening the image.	1.24.1
AST-1469	Attempts to import non-image DICOM files are now handled correctly.	1.24.0
AST-1640	In previous versions, when a tag for an annotation was created and this operation was not finished by pressing "enter", the name of the tag was not displayed. This has been fixed.	1.24.1
AST-2062	With the context menu open on an annotation, another right click on another object did not deselect the previous object. Thus it was possible to accidentally perform operations on the wrong object. This has been fixed.	1.24.1
AST-2071	Because of some problems with this feature, doing measurements in frames of video clips has been deactivated temporarily.	1.24.1
AST-2433	The "Image Notes and Comments"-side panel behaved inconsistently and has now been fixed.	1.24.1
AST-2971	When playing very large DICOM clips, the framerate could sometimes drop to very low values. This has been fixed.	1.24.3
AST-3208, AST-3168, ASTIS-105	Because of problems with the thumbnails, loading of images when opening a patient file could be very slow on earlier 1.24 versions. Occasionally not all thumbnails were displayed, or displayed correctly. This has been fixed.	1.24.3
AST-3256	Printing a large number of images either directly or in the reports was very slow in earlier 1.24 versions and could cause astraia to run out of memory. This has been improved. Limits to the number of images allowed in one printout have been introduced. Users are not allowed to print more than 100 images (configurations with 1024 MB).	1.24.4
AST-3272	In version 1.24, astraia uses a new format for storing measurements and annotations. Measurements and annotations from earlier versions will be converted during updating. If this fails for some images, a summary will be displayed at the end of the updating process indicating the number of failed conversions. In the log files you find a comprehensive list of affected images and patients.	1.24.4
AST-3536	Clicking on the patient data window while the Image Viewer window is	1.24.5

	open caused the Image Viewer window to be hidden. This made it impossible to look at an image and enter data at the same time. The Image Viewer window now stays on top like in version 1.23.	
AST-3576	In order for a right-click to invoke the context menu on a measurement in an image, it is not necessary anymore to explicitly select the 'Select and Move' tool. A right-click will always bring up the context menu which restores the behaviour from 1.23.	1.24.5
AST-3578	In previous versions of 1.24 when trying to perform a measurement on an image that is not calibrated yet, the user is asked to calibrate it first. It used to be necessary to reselect the measurement tool after calibration, but now astraia remembers and automatically activates the previously selected tool.	1.24.5
AST-3606	The Reopen button (tooltip: Create a new View with the images selected) in the Image Viewer's toolbar can be used to open a subset of the currently displayed images. When there was only one image displayed, that button used to be hidden because in that case no smaller subset of images exists. The button is now disabled instead of hidden to make the user interface more consistent and less confusing for the user.	1.24.5
AST-3276	In 1.24, a new format is used for storing measurements and annotations in images. When updating from older versions to 1.24, measurements and annotations should be updated automatically. In case this fails for some images, the user will be notified when opening such an image that old measurements and/or annotations are available and that they will be overwritten if he chooses to add new measurements/annotations.	1.24.5
AST-3586	The workflow for moving measurements and annotations in images in the Image Viewer changed from 1.23 to 1.24.4. In 1.24.4 two mouse clicks were necessary, in 1.23 just one; measurements could be dragged directly. In 1.24.5 both ways are possible.	1.24.5
AST-3634, AST-3707	Image loading time in the Image Viewer has been improved substantially.	1.24.5
AST-3647	In previous versions of 1.24 when measuring small distances with the calliper tool, the box containing the current distance value could sometimes obscure the feature being measured. Therefore, the measurement value box is now only displayed when the measurement is complete by default.	1.24.5
AST-3758	In some cases, the arrow buttons in the Image Viewer that can be used to go to the previous or next image became enabled when they should not be. This has been fixed.	1.24.5

AST-3894	When the DICOM port (default: 1104) was being used or blocked on a client for some reason (for instance by a firewall), the entire imaging module was disabled not just on that client, but also on all others connected to the same server. This was unnecessary and could only be worked around by re-enabling the imaging module on the affected machines. This has been fixed. The imaging module will only be disabled on the blocked client; an error message will be shown.	1.24.6
AST-4574	When exporting an image and selecting 'All files' as the file type, the image export failed due to the missing clearly defined file type extension. This has been fixed. When exporting, the file type option 'All files' does not exist anymore.	1.24.10
AST-4573	When exporting an image and choosing the filename of an existing file, the existing file was not overwritten. Instead a file with the existing file's name and an additional superfluous file type extension was created. This has been fixed. It is now possible to overwrite existing images if the user chooses to.	1.24.10
AST-4572	When exporting several images at once, already existing images were overwritten if they carried the same names as the new ones. This has been fixed. Now images are automatically exported into patient-specific folders. The filenames carry two timestamps indicating the date and time of the export as well as the examination date.	1.24.10
AST-4534	When updating to astraia 1.24.5 or later, converting measurements and annotations on images that were performed in version 1.23 or earlier failed. Opening affected images would display an error message. This problem has been fixed. Updating from any earlier version will convert measurements and annotations which will make them available again when opening affected images.	1.24.10
AST-3647	In previous versions of 1.24 when measuring small distances with the caliper tool, the box containing the current distance value could sometimes obscure the feature being measured. Therefore, the measurement value box is now only displayed when the measurement is complete by default.	1.24.10

7.12 Worklist

AST-3866	There was problem with Polish characters on the worklist: It was not possible to receive patients whose name starts with the character 'Ż' in their name via the worklist. This has been fixed.	1.24.6
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7.13 Audit

AST-2501	In the First Trimester Audit, the filter for dates did not work in certain languages and with certain ORACLE versions (10, 11). This is now fixed.	1.23.6.1_20140214 / 1.23.6.2 / 1.24.0
AST-2517	In the First Trimester Audit, import of previously exported files did not always work. This has been fixed.	1.24.0
AST-4125	The printout of the First Trimester Audit did not respect the paper margins and ended up cropped. This is now fixed.	1.24.8

7.14 Printouts / Reports

AST-1786	In the Chinese Language version there was a problem with HTML tags showing up in the reports. This has been fixed.	1.24.2
AST-1798	The "EDD by scan"-field can now correctly be suppressed in printouts. It cannot be suppressed in the First trimester screening report as it is required there.	1.24.0
AST-1877	In printouts, the abbreviations for "weeks" and "days" in gestational age used to show up as "w" and "d" in any language. This has been fixed.	1.24.0
AST-1920	Changes in image contrast or brightness have not been reflected in the print preview under certain circumstances. This has been fixed.	1.24.0
AST-2220	Printed percentiles are now robust against changes of the chart.	1.24.0
AST-2321	Re-printing stored printouts using the print preview in the Audit Trail was broken and has now been fixed.	1.24.0
AST-2333	User specific saving of default selections for printouts (doctors, patient, own copy and copy for file) have not been saved for admin users. This has been fixed.	1.24.0
AST-2744	The validation status of an examination can now be put on a report.	1.24.0
AST-2760	The printout of the pelvis data was broken when the chart renal pelvis from Benacerraf was selected. This is now fixed.	1.24.0
AST-2855	Several issues with the printout of family history have been corrected: Formatting of issues "on partner's side" and "on patient's side" has been improved, and the field labels are now displayed correctly.	1.24.3
AST-3000,	Some formatting problems in the German report	1.24.2

AST-3002	"Zweittrimesterscreening" have been corrected.	
AST-3284	In earlier versions of 1.24, creating a PDF from a printout could give an error message. This has been fixed.	1.24.4
AST-3332	In 1.24.3, images have been printed in a different order than they were displayed in the image viewer. This has been fixed.	1.24.4
AST-3605	For certain report font size settings, a small white line was visible on headings in report files. This was visible not only in exported PDF files, but also on the actual printout. This has been fixed.	1.24.5
AST-631	When displaying the print preview of the printout 'Follicle tracking' in a Gynaecology case, the selection of images in the Image Browser was lost. The user had to select them again for another printout. This has been fixed.	1.24.5
AST-3533	The time needed for downloading images before printing them has been substantially reduced compared to 1.24.4.	1.24.5
AST-3655	In the Reporter module (Examination - letters), you can create predefined items with often used text segments. These items can be organized in a hierarchy using folders. Creating a new subitem of another item used to always make that other item a folder which meant that if an item contained its own text segment, it was lost. Now it is only possible to create subitems for items that don't have their own text, so no text segments are inadvertently lost.	1.24.6
AST-3770	There were problems with the PDF export of reports when the filename contained the report name, and the xml template for the report was in subfolder. This has been fixed.	1.24.6
AST-3777	The first trimester's risk results were sometimes not printed correctly in plaintext reports; labels, the FMF operator and linebreaks could be missing. This has been fixed.	1.24.6
AST-3881	When printing the first trimester's information on a report, it could happen that the heading 'Risk calculation' (but not the risk itself) was printed inadvertently. This does not happen anymore.	1.24.6
AST-3882	It could happen that astraia modified a report template to include two deprecated report items causing astraia to display two unwanted sections. This has been fixed.	1.24.6
AST-3855	In report templates, there was a problem with incorrect indentation inside tables when using the <lindent> tag. This has been fixed.	1.24.6
AST-4062	When switching to Spanish language, the First Trimester Report was not available to select anymore. This has been resolved.	1.24.8
AST-4462	In 1.24.8, printing did not work when there were user-defined fields	1.24.9

	on the fetus level. This has been fixed.	
AST-4848	When having open two patients - one opened from a query and another one opened from the lookup table -, for printing always the patient opened from the query was considered selected and subsequently printed. This was even the case when the patient opened via the lookup table was actively selected and looked at. This behaviour could result in confusion as in such a situation the printout would be done for another patient than intended. This has been fixed and now always the actively selected patient will be printed.	1.24.10
AST-4653	The father's height and ethnicity (only available on the SIEOG study screen) were printed mistakably on a report. It was not clear whether the values referred to the mother or the father. This has been fixed.	1.24.10
AST-3841	Whenever at least one of the two fields starting with 'Eligible for...' in the Counselling section were ticked, the headings for the two sections 'Choice parents' and 'Management after testing' were displayed on a report even when there was not data entered in those sections. This has been fixed.	1.24.10
AST-3778	The visualization of growth bars in plain text reports have been improved to make them more similar to their representation in the screen.	1.24.10
ASTWRS-33	The astraia Web report service performed unnecessary requests which impacted the performance negatively. This has been fixed.	1.24.10
ASTWRS-32	A bug affecting the astraia Web report service caused images not to be displayed on the resulting web reports. This has been fixed.	1.24.10

7.15 Database Queries

AST-2196	In queries with enabled data range option, the labels of the radio buttons to select data range have been corrected to "Yesterday", "Last week" and "Last month".	1.24.0
AST-3037	In installations with an Oracle DB, when the user runs the default query "Missed Appointments", date is displayed instead of time in the column 'time'. This has been fixed for new installations. In existing installations, users need to modify the query manually by changing Diary.ATime to TO_CHAR (Diary.ATime, 'HH24:MI').	1.24.2
AST-3321, AST-3443	The query 'Patients with images' did not return the correct number of images that belong to each patient. This has been fixed.	1.24.4
AST-3712, AST-3691	With Oracle databases, query results that included a decimal value were displayed as rounded integers. This is fixed.	1.24.5

AST-4732	In some languages (e.g. Greek) the query result exported to an external program (csv, excel) was shown with different decimal separators than Excel expected. This has been fixed by adding a new property (Query.Export.Separator) which overwrites the decimal separator used in a query result export to csv and excel.	1.24.10
AST-4617	In the default query "Fetal Abnormalities" in the English and Spanish version of astraia the column for Spine abnormalities was named "Neck/skin" and the column for Neck/skin abnormalities was named "Abnormalities". This has been corrected: now the column for Spine abnormalities is named "Spine" and the column for Neck/skin abnormalities is named "Neck/skin".	1.24.10
AST-4592	When creating a query using the query builder, some fields' values (e.g. for Uterine Artery PI) were incorrectly rounded in the query results list when the Czech language was selected. This could lead to a value of 1.88 being displayed as 1.0. The problem did not occur when changing the language to English. This has been fixed.	1.24.10
AST-4580	For some queries in the Query module, opening patients from the results list was not possible when using an Oracle database. This has been fixed.	1.24.10
AST-4537	If you created a query for any field with the condition "field not empty" and chose to have either "centile" or "delta value", in the result the value was multiplied by 10000 and no delta or centiles were exported. This has been fixed.	1.24.10

7.16 Audit Trail

AST-3532	In 1.24.3, printouts with images were not always stored correctly in the Audit Trail. This has been fixed.	1.24.4
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7.17 Lab Interfaces

AST-3265	Message transfer to PerkinElmer AutoDELFIA has been fixed in this release. Please contact PerkinElmer for more information.	1.24.4
AST-3595	In version 1.24.3 there was a character restriction on the field "Sample Number" in First Trimester - Biochemistry. Special characters like "/" or "*" could not be entered. This restriction has been lifted in 1.24.5.	1.24.5
AST-3636	In the Lifecycle Interface, there was a problem when selecting "date of conception" for dating the pregnancy in astraia. This has been fixed.	1.24.6
AST-3939	The Autodelfia service could not be started when using an Oracle	1.24.6

	database. This has been fixed.	
AST-3831	It is now possible to add more than 4 devices in the Kryptor Lab interface configuration.	1.24.6

7.18 Languages

AST-3382	The translation for the gestational age in Simplified Chinese was not correct. This has been fixed.	1.24.6
AST-3710	Wrong translations of 'Coarctation of the aorta' and 'Pulmonary atresia' in Simplified Chinese have been corrected.	1.24.6
AST-3743	In Simplified Chinese, the translations for "Multicystic" and "Polycystic" were incorrect and have been fixed.	1.24.7
AST-3876	In the screen Counseling, the phrase "Management after testing" has been wrongly translated to Dutch as "Counselling na ongunstige uitslag". This has been corrected.	1.24.8
AST-4189	In the Obstetrics --> History, "yes / no" has been wrongly translated to Italian as "presente / assente" in several screens. This has been fixed.	1.24.8
AST-4697	In the screen Adnexal Masses in the list Origin the Italian translation of "fallopian tube" was wrongly translated as "Ovaio destro". The translation has been corrected to "tuba".	1.24.10
AST-4555	In astraia version 1.24.8 and 1.24.9 the translation of the list item "yes" in Maternal Structures - Adnexal masses - Presence of Metastases showed in English in all languages. This has been fixed and the previous translations are shown again.	1.24.10
AST-4550	The footer on the printout of the 1st Trimester Audit used the US date format and was translated wrong in Italian. Now the date format on the 1st Trimester Audit uses dd MMM yyyy (e.g. 17 mar 2016) in all languages and the Italian translation has been corrected to "Stampato il".	1.24.10
AST-4521	In the German version of astraia "Cerclage" was translated either as "Zerklage" or "Cerclage". Now it is translated consistently as "Cerclage".	1.24.10
AST-4313	The chart titles of AC, HC, BPD, FL for twins were not translated in the Portuguese (Portugal) translation of astraia. This has been fixed.	1.24.10
AST-4296	In the Albanian translation of the astraia software the following lists in the module Gynaecology were not translated: History -> Contraception	1.24.10

	-> List; History -> Surgery -> List; History -> Disease; Clinical Examination -> Colour -> List; Clinical Examination -> Quantity -> List; Pelvic assessment -> Painmapping block. This has been fixed.	
AST-4603	The following orthographical improvements have been made in the Spanish translation of astraia: For consistency reasons many first letters have been changed to capital letters. Missing accents have been added where needed.	1.24.10

7.19 Database

AST-2259	The problem with error messages because of malformed byte sequences in the Greek language version has been solved.	1.24.0
AST-2502	Limiting the maximal number of database connections in the connection pool did not always work. This has been fixed.	1.24.4
AST-3259	The database connection pool did not correctly reassign connections, causing a thread to sometimes use connections that are still in use by other threads. This issue could have adverse effect especially with Oracle databases, and has been fixed.	1.24.4
AST-4003	In network installations, when two or more clients tried to save a patient at exactly the same time, astraia would assign both patients the same key for the table "Fetus", and was unable to save the patients because of the duplicate keys. This has been corrected.	1.24.8
AST-4018, AST-4026	A combination of bugs could lead to data loss under highly unlikely circumstances. In the table Fetus.EP_Malformation_details database the column size was mistakenly set to 1000, while the input limit on the user interface was 4000. This led to an error message when saving the patient data if a comment was entered that exceeded the 1000 character limit in the first place, but not if a comment of fewer than 1000 characters was entered, saved and later updated to more than 1000 characters. In that case, data could be lost. This issue has been fixed: The column size was corrected, and the error message correctly displayed.	1.24.6
AST-4025	When entering a very long name in a patient's 'Other names' field using non-latin characters such as cyrillic, the character limit of 100 could not be fully used. An error message appeared stating that the data could not be saved due to right truncation of string data. This previously fixed bug which affects only Sybase installations was reintroduced in 1.24.5 and has been fixed.	1.24.6
AST-4031	An issue with the character encoding in Sybase could lead to a	1.24.7

	mismatch of database field length and input length on the UI. This has been fixed with this version, and a script bundled with the installer repairs the existing fields during an update.	
AST-4183	A faulty handling on timestamps in the case selector led to problems with Oracla databases after an update to 1.24.7. Patients were locked and could not be opened. This has been fixed.	1.24.8
AST-4267	With a large number of examinations with data for free beta-hCG, PAPP-A or PIGF on the First trimester -> Biochemistry screen, there was a performance issue. Opening the Biochemistry screen could take a long time. This has been improved.	1.24.10
AST-4843	A number of unnecessary database access operations has been removed. This leads to an improved performance of the application.	1.24.10
AST-4840	The performance of astraia was negatively affected due to a background query running against the Message table with WHERE clauses containing not indexed columns. Missing indexes have been added and as a result the performance of astraia has been improved.	1.24.10

7.20 Measurement Data Transfer

AST-3633	When importing Amniotic fluid measurement data from an ultrasound machine, the data was saved incorrectly (multiplied by a factor of 10) for some Cyrillic languages. This has been fixed in 1.24.5. A workaround for older versions is available.	1.24.5
ASTMS-33	For the ultrasound systems Voluson E8 and E10 by GE, the transfer of the nasal bone length to astraia was not working. This has been fixed.	1.24.10

7.21 Options

7.21.1 Appearance

AST-2013	Problems with displaying Chinese characters on the astraia desktop after switching to Chinese from another language have been fixed.	1.24.2
AST-2018	When selecting to edit the astraia blue theme, after clicking exit the default theme was not in the list anymore. This has been fixed.	1.24.0
AST-1343	When changing the language to Chinese, the interface's colour scheme changed immediately (in order to enhance the display of Chinese characters) after selecting the language. Now it only changes once the OK button has been pressed.	1.24.6

7.21.2 Administrator

AST-2101	In e-mail configuration, 'Server requires authentication' could not be unchecked. This has been fixed.	1.24.0
AST-3625	In previous versions of 1.24 when trying to import a faulty Diagnosis field export file where a diagnosis had a hidden diagnosis as its parent, astraia could crash. This has been fixed.	1.24.5

7.21.3 Users

AST-2811	When the user table was reordered and the admin tried to change a certain user's password, the user selection did not work correctly. This is now fixed.	1.24.0
AST-3295	With users sorted by department, the department window could not display all departments if there were too many of them. Now the window can be scrolled in both directions if necessary.	1.24.4
AST-4621	Users that are in a group with the restriction "can not view examination data" enabled should be able to still modify demographic data. This did not work in version 1.24.9 and has been fixed.	1.24.10

7.21.4 Charts

AST-2352	The title of the 'left femur'-chart has been changed to "Left Femur".	1.24.0
AST-2677	The BPD/FL chart (Snijders ea.) was wrongly named "BPD". This is now corrected.	1.24.0
AST-2960	If the Hadlock chart without standard deviation was selected for BPD, a value entered for BPD in the Biometry / Anatomy screen was not retained. This has been fixed.	1.24.1
AST-4791	The CRL chart based on Loughna et al. Ultrasound 2009; 17: 161-167 is a dating chart to calculate GA by CRL and must not be selected as growth chart in the list of Charts in Options - Charts. Therefore, if the CRL chart from Loughna is accidentally selected as growth chart and in Options - Charts - dating - CRL "Use growth chart" is selected as dating method, the GA should not be calculated at all based on CRL. Yet, there existed a bug that allowed GA to be calculated based on Loughna CRL chart for CRL values between 11mm - 13.9mm. This has been fixed.	1.24.10

7.21.5 FMF Risks

AST-3711	The automatic update of FMF licenses was activated regardless of the corresponding setting in the Options dialog. This has been fixed.	1.24.5
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7.22 Help Files

AST-3878	In the English Help Files (F1), the page 'Screen configuration' was empty. This has been fixed.	1.24.6
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7.23 Properties

AST-1575	Only admin users are now allowed to change or add properties through the Help - About window.	1.24.0
AST-2233	For new installations, DBConnectionPool is now enabled by default.	1.24.0
AST-2501	Limiting the maximal number of database connections in the connection pool did not always work. This has been fixed.	1.24.4
AST-3470	On Installations with MSSQL, problems could arise with duplicated properties, which caused errors when users wanted to enter configuration data like auxiliary image path. This has been fixed.	1.24.5

7.24 Installation

AST-1135	In updates of installations with an Oracle DB, the indices for Oracle were not created properly, resulting in performance problems with large DBs. This is fixed now.	1.24.2
AST-2408	For fresh network installations, the initialization of the database was not done correctly and the installation failed. This has been fixed.	1.24.0
AST-3597	When updating from a 1.23 version to 1.24.4 in Greek, Russian, Bulgarian, Ukrainian, Serbian, Chinese, Korean, Hebrew and Japanese, an error message "Right truncation of string data" appeared when a patient's risk calculation text became too long, depending on the number of calculated risks. Recalculated risks with a text too long were not saved. This has been fixed.	1.24.5
ASTWINST-66	In the astraia installation wizard, the entry for the English language appeared several times in the language selection dialog. This has been fixed.	1.24.10