



# astraia software

for women's health  
obstetric and gynaecological database application



The astraia software solutions offer a flexible and scalable data management tool with advanced medical functionalities. It has been designed for and in collaboration with healthcare professionals in Obstetrics and Gynaecology, to optimize their daily workflows.

Using our structured report templates, it takes only a few mouse clicks to create an attractive report to hand out to the patient, or for the referring doctor.

The modular structure of astraia allows you to tailor the installation to your needs. Five highly specialized reporting modules cover a wide range of aspects in women's health.

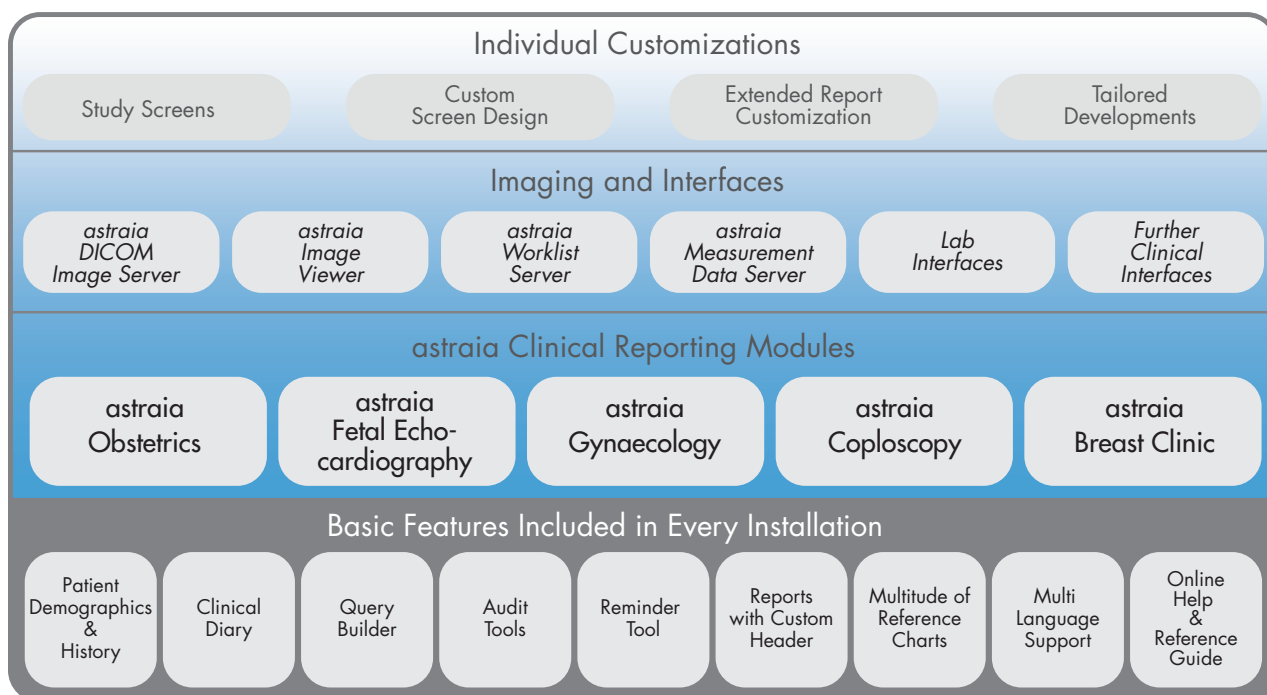
Our entry-level solution is a standalone installation, ideal for a private practice with limited connectivity needs. It then can be easily adapted as the practice grows and needs to upgrade. Any installation can be expanded into a highly complex network installation, with unlimited users, a multitude of interfaces and a smooth integration into the existing IT environment. You can pick and choose exactly what you need to help your workflow be most efficient.

The development of our software has been guided by the following goals:

- ✓ Improve the documentation quality by creating common documentation standards for all the doctors in the clinic or practice to use.
- ✓ Save the doctor time with the documentation; time that can be spent more productively directly with the patient.
- ✓ Improve the workflow and guide the doctor throughout the examination, thus creating and supporting a uniform standard for your practice or clinic.
- ✓ Provide a highly customizable tool to easily adapt reports, workflows, and documentation standards to your needs.

By using astraia you will have a comprehensive, structured, accessible and multi-modal documentation finished when the patient walks out of the door.

*Using our structured report templates, it takes only a few mouse clicks to create an attractive report to hand out to the patient, or for the referring doctor.*



## Every astraia installation comes with

- ✓ Administration of patient records
- ✓ Documentation of patient demographics and medical history
- ✓ Easy-to-use navigation
- ✓ Predefined structured data entry screens
- ✓ Reporting tool for printouts with all relevant data, images and selected charts
- ✓ Customized letter header for all your printouts created from astraia
- ✓ Online help and medical references and explanations
- ✓ Diary to book and manage appointments
- ✓ Case summaries and automatic highlighting of significant examination results
- ✓ Easy-to-use query builder
- ✓ Screen configuration tool to hide fields, make fields mandatory, or add user-defined fields in order to tailor astraia to your specific workflow needs.
- ✓ Audit tools for reliable quality control
- ✓ Standardized medical terminology
- ✓ Multiple languages and alternative screens to adapt to regional specifications
- ✓ Possibility to share patient records with colleagues via email, pdf, fax or printout

## Comprehensive data management for an efficient workflow

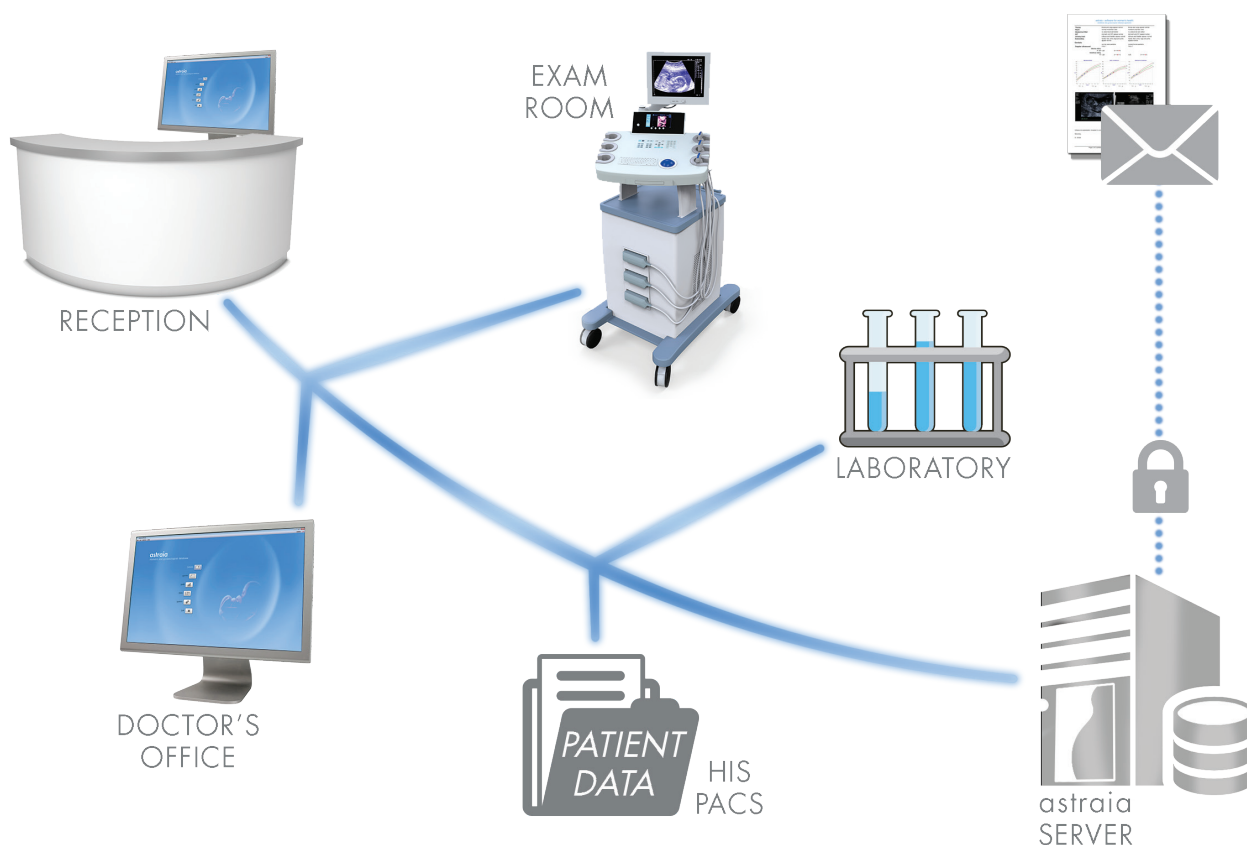
Optimal patient care and workflow efficiency depend both on the ability to effectively document important data. The capability to access immediately all clinically relevant information at all times is essential. The steady accumulation of image data, measurements and diagnostic results across devices poses an increasing challenge for many practices today. While streamlining the clinical workflow through structured data entry screens, the astraia server configuration provides a reliable storage solution for all patient data, images, video clips and measurements. It enables easy access to support fast and accurate assessments. In practical terms, this means that when a patient comes in

for a subsequent visit, her medical history and all previous examination data are available to you for review.

Using DICOM, HL7 and other standards, astraia links all diagnostic instruments of virtually all manufacturers and integrates smoothly with existing patient and hospital information systems (HIS).

Astraia has been translated into more than 20 languages. You can switch easily between languages - even during an examination. This can facilitate communication in a multilingual environment but also support international multicentre studies.

*Efficiency is key in today's healthcare facilities. With astraia you can simplify significantly the overall clinical workflow and save time.*



Thorough clinical assessments take time. As do patient consultations. With astraia's intuitive screen navigation and automated data transfer a lot of time-consuming documentation has already been taken off your to-do-list. Pre-configured data entry screens guide you through the examinations, prompting data entry fields at the right time, thus reducing the risk of accidentally missing important fields. Astraia brings together all clinically relevant diagnostic data for your patient, displaying them in clearly structured views for a fast, and accurate evaluation.

This lets you focus on the most pressing issues to choose the best course of treatment.

Once configured according to your workflow, astraia will minimize any need to keep paper-based notes, reminders or documents. This not only saves on storage space and printing costs, but also removes the cumbersomeness of manually searching for archived documents.

Patient demographics are sent from the reception to the ultrasound device via the worklist with a single click. From there it transfers images and measurements just as easily to the patient record, which is now ready to be reviewed at the doctor's desk.

All data are stored safely in a database, with automatic backups performed at a predefined time.

## astraira Obstetrics

The astraira Obstetrics module enables you to monitor maternal and fetal health from pre-pregnancy through to delivery. For every pregnancy, no matter whether low or high risk, it is extremely important to record history, indication, all relevant measurements, findings and have an accurate documentation of your conclusions

Well-structured screens guide you step-by-step through the examinations. Depending on the data you enter, the screens may expand and reveal further entries. Information buttons are available for many subjects throughout the screens to give you quick access to medical references and background knowledge.

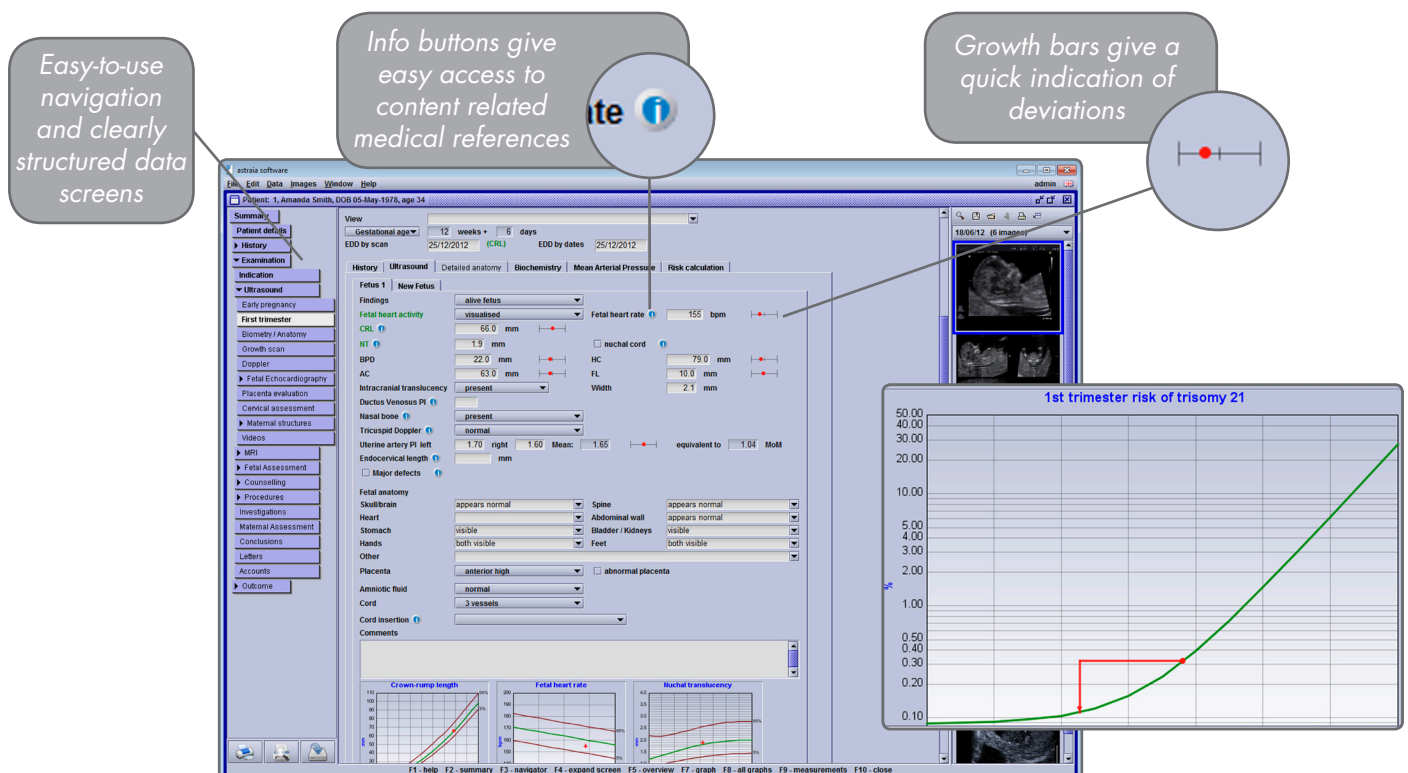
Images and measurements from ultrasound machines can automatically be transferred to astraira, where you can view, edit and store them safely. You can make measurements conveniently from your desk, transfer the data to the respective database field and make annotations in the image.

A growth bar appears next to the data field, indicating how your measurement deviates from the standard defined by the published expected value. Furthermore, the corresponding reference chart can be viewed with a single click. There are hundreds of reference charts available as well as tools to help you select those which fit your patient demographics best.

The FMF London's First Trimester Risk Calculation is built into the Obstetrics screens. The calculation makes use of data collected during a first trimester exam and is available exclusively for clinicians certified with the FMF London. Astraira maintains its status at the cutting edge of medical development and endorses research by supporting medical studies. An example of this is the joint EU project looking at improving the assessment of pre-eclampsia in the early stage of pregnancy and the preventive effect of Aspirin (ASPRE, EU grant #601852).

### Key features at a glance

- ✓ Covers the whole pregnancy and prenatal diagnostics
- ✓ Antenatal history and diagnostic findings
- ✓ Family history with pedigree builder
- ✓ Complete ultrasound examination of fetus and maternal structures
- ✓ Fetal and maternal Doppler screens
- ✓ User selectable reference charts and graphical representation of measurement results
- ✓ Documentation of invasive and non-invasive procedures
- ✓ Genetic counselling
- ✓ Various risk assessments (first and second trimester)
- ✓ Documentation of diagnosis, outcome and conclusions



## astraira Colposcopy

This module provides a wide-ranging tool for colposcopic examinations. A clear, step-by-step menu navigation enables you to document and evaluate these examinations while they are taking place. Findings can also be documented

graphically.

Images taken with colposcopes can be transferred wirelessly to astraira.

## astraia Gynaecology

Covering all aspects of gynaecological health, this module allows you to document gynaecological history, diagnostic findings and your examination results.

Comprehensive data entry screens for the examination of uterus, ovaries, adnexae, bladder and kidneys allow you

### Key features at a glance

- ✓ Documentation of medical history and diagnostic findings
- ✓ Comprehensive clinical examinations, e.g. follicle tracking, endoscopic procedures and ultrasound examinations
- ✓ Documentation of cervical smear, endometrial biopsy, implant, cyst aspiration, IUCD insertion, infections, ectopic injection and ERCP
- ✓ Full ultrasound investigation
- ✓ Detailed assessment of early pregnancy
- ✓ Laparoscopy
- ✓ Hysteroscopy
- ✓ Laparotomy
- ✓ Documentation of lab requests and results
- ✓ Risk assessment of malignancy for adnexal masses (Simple Rules, IOTA LRZ, RMI)
- ✓ Diagnosis, conclusions and outcome

The screenshot displays the astraia Gynaecology software interface. On the left is a navigation menu with categories like Patient details, Examination, Ultrasound, and Procedures. The main area shows a 'Mass 1' entry with fields for Position (unilateral), Side (right), Origin (ovary), and various measurements (Size of ovary, Size of lesion, Volume). A 'Risks of malignancy for adnexal masses' window is open, showing 'Simple rules' (IOTA LR2, RMI) with 'B-rules' and 'M-rules' for assessment. Below the rules are six panels (a-f) showing ultrasound images with color Doppler overlays. A callout box points to the interface with the text: 'Content based help files and extensive medical references and explanations are available throughout the screens'.

## astraia Fetal Echocardiography

Designed for fetal cardiac experts, this module assists you with its clear menu navigation, prompts for examinations and a-priori findings to decide on the best examination strategy for your patient. Based on your data entries, the programme will recommend further ultrasound procedures and make suggestions for the Doppler examination and additional biometric measurements of the fetal heart. The results from

these measurements can be displayed graphically. The comprehensive and detailed help files guide you through even the most complex measurement procedures. Therefore it also provides an excellent tool for advanced training in ultrasound diagnostics of the fetal heart.

It can be integrated into astraia Obstetrics, or chosen as a separate entity.



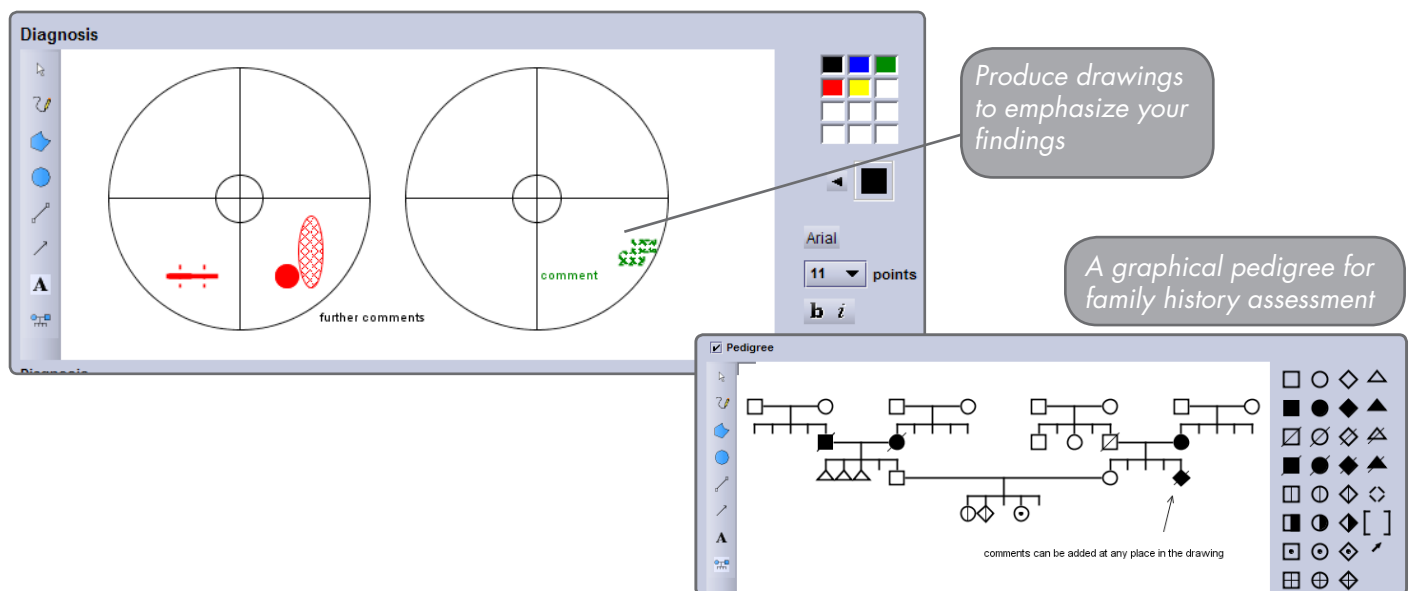
## astraia Breast Clinic

This module offers you a comprehensive tool for a detailed breast exam, documenting results of mammography, clinical and ultrasound examinations. You can add sketches or drawings to emphasize the clinical diagnosis and facilitate patient education. There is a detailed screen for history,

including a pedigree drawing tool to assess the family history. The terminology is consistently based on the BIRADS classification. MRM examinations include the Göttinger-Score-System.

### Key features at a glance

- ✓ Medical history, including pedigree
- ✓ Indication for examination
- ✓ Clinical examination, including palpation (breasts and lymph nodes)
- ✓ Mammography (breasts and lymph nodes)
- ✓ Ultrasound examination (breasts and lymph nodes)
- ✓ MRM examination, including Göttinger-Score-System
- ✓ Documentation of invasive procedures
- ✓ Diagnosis (including a drawing module to produce a sketch)
- ✓ Outcome



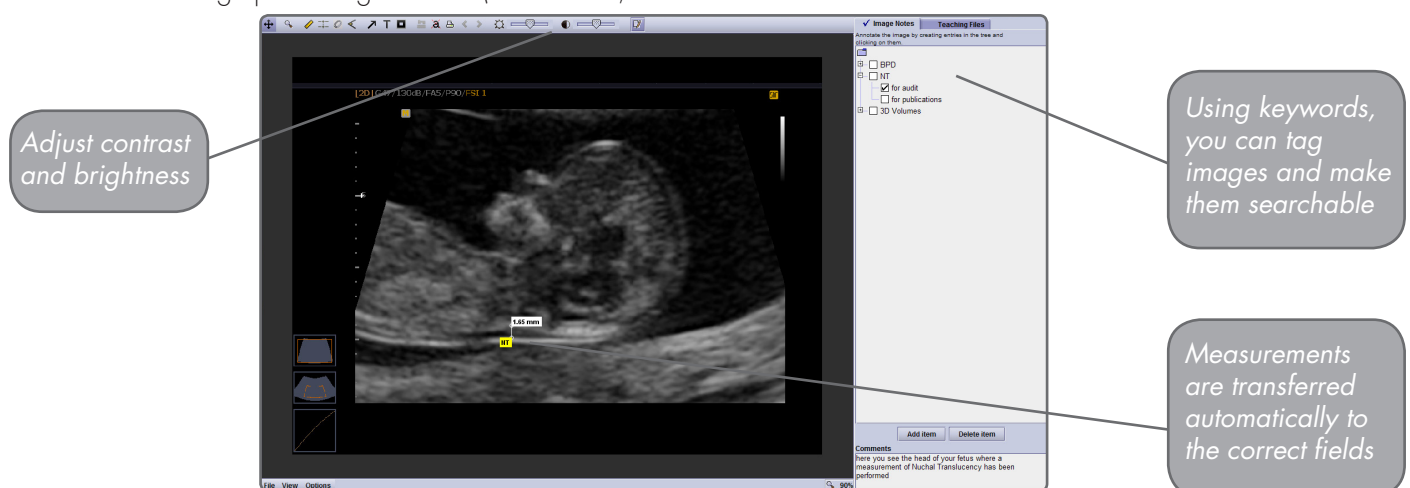
## astraia Imaging

Transfer DICOM images, clips and volumes with one click from your ultrasound machine to astraia. The astraia Image Viewer is fully DICOM compatible and can also be linked to existing RIS/PACS systems. Images are clearly assigned to the corresponding patient ensuring there is no loss or mixing up.

With standard image processing functions (i.e. contrast,

zoom, brightness), images can be enhanced and effectively displayed on the screen. Annotations and measurements can be made directly in the astraia Image Viewer. Values are transferred automatically to the correct data field.

Images can be tagged with keywords of your choice, facilitating image searching at a later time.



# astrai Standard Features

## Graphical Query Builder

The possibility to easily query data from your database is invaluable for studies and quality control. The integrated query tool offers a long list of predefined queries, ready to be used. Building your own query to retrieve the data you need is just as easy: from the query builder, click on the fields and set the conditions. All data entered into astrai

can be queried with this tool. Results can be viewed, printed or exported into various standard formats, ready for further processing.

You can organize the queries by category and share them with colleagues via the export functionality.

Pre-defined Database Queries	Description	Category	Created	Last run on	
1st and 2nd trim risks			23/04/2008	10/03/2014	All
Accounts by month			23/05/2006		
Amniocentesis			28/04/2005		
Amnion and CVSs			05/09/2005		
ASD/CAL query			16/05/2005		
BPD dist			13/10/2004		
CVS			26/04/2005		
Delta AC and EFW			11/03/2008		
Delta BPD			18/04/2006		
Diagnosis	1562346124		05/09/2005		
Diary appointments			18/05/2005		
Diary missed appointments			04/05/2010		
example			14/08/2014	14/08/2014	
Fetal abnormalities			20/05/2005		
FPMF abnormal biochemistry			18/09/2004		
FPMF abnormal karyotypes			13/10/2004		
FPMF list of patients with no outcome and EDD before one month ago			18/09/2004		
FPMF NT > 95th centile			05/09/2005		
FPMF risk cut-off			05/09/2005		
Growth scans			05/09/2005		
Insurance			27/05/2005		
Karyotypes / Outcomes with an NT scan		1st Trimester	14/09/2005		
List of all patients			24/05/2005		
List of all referring doctors			21/09/2002		
List of outstanding test results			21/09/2002		
List of patients with no outcome and EDD before one month ago			21/09/2002		
Measurements received			13/10/2004		
Name			06/03/2014		
Operators			22/12/2004		
Outstanding karyotypes			17/01/2008		
Patients with images			28/05/2005		
Possible duplicate patients			30/08/2005		
Pregnancy Diagnoses by Year			18/05/2005		
Query with note		1st Trimester	18/02/2014		
Scans and procedures			18/05/2005		
Un-validated examinations			04/01/2005		
Worklist			05/05/2008		

Maternal Assessment	History	Ultrasound	Detailed anatomy	Biochemistry	Mean Arterial P
Conclusions	Findings	early embryonic or fetal demise			
Letters	Chorionicity	>3 in combination with monochorionicity			
Accounts	Fetal heart activity	visualised with bradycardia			
ASPRE	CRL	999.9 mm			
Screening visit	NT above cord	99.9 mm			
Telephone interview	NT	99.9 mm			
Clinical visits	BPD	99.9 mm			
Outcome	AC	999.9 mm			
Delivery	Intracranial translucency	not examined			
Check-in					
Outcome					
Accounts					

Table	Fetus	Column	NT
Label	NT		
<input checked="" type="checkbox"/> Set a condition is greater than: <input type="text" value="2"/>			

## Audit Tools

The built-in audit tools offer you a variety of quality control options. An automatic trail tracks exactly who entered or

changed what and when. All reports, once created, can be retrieved for future reference. This way you can not only check for consistency but also avoid fraud. Groups or individuals can also be monitored for quality control.


With the statistical audit tools you can create a detailed analysis of the 2nd trimester biometry measurements, FMU and EPU statistic, a KC65 Colposcopy report, and of course the First Trimester Audit, which is sent directly to the Fetal Medicine Foundation (London, UK).

Audits can be run for each individual sonographer separately, as well as for a whole centre. With the optional Automatic Audit you can also perform a set of database queries at a preset time. These queries can be synchronized between centres and exchanged via the internet. All data is encrypted.

## Printing Reports

You can generate attractive reports, that include all relevant data for your patient, with just one click. Astrai supplies a set of standardized reports for all major exam types. With their clear design and your personal letter header, they are a great way to represent your examination results and diagnosis.

It is very easy to add images and drawings to each report. Charts can also be included, which can be a great help in visualizing trends and deviations. You can share your reports with your colleagues or patients using email, printouts, fax or internal networks.

 <b>astrai</b> software for women's health software for women's health software for women's health	
Prof. Dr. Christina Jones Consultant 1 Westmoreland Drive London E17 8BT	
<b>Aggravated Pregnancy</b> Date of scan: 22 April 2013 Operator: Prof. Dr. Christina Jones Address: 1 Westmoreland Drive, London E17 8BT	
<b>History</b> 1st trimester ultrasound: 13 weeks + 5 days from CRL 2nd trimester ultrasound: 21 weeks + 5 days from CRL 3rd trimester ultrasound: 34 weeks + 5 days from CRL	
<b>First Trimester Ultrasound</b> Gestational age: 13 weeks + 5 days from CRL Fetal heart activity: visualised Crown-rump length (CRL): 45.0 mm Nuchal translucency (NT): 2.8 mm Nasal bone length (NBL): 2.1 mm Fetal circumference (FC): 88.0 mm Abdominal circumference (AC): 88.0 mm Fetal weight (FW): 2.1 mm Intracranial translucency: present Chromosomal analysis: normal	
<b>Second Trimester Biochemistry</b> Taken on 05 June 2013, analysed on 05 June 2013. Equipment: 880465 Results: Free hCG: 54.00 U/L (reference: 1.0-10.0 U/L) AFP-A: 4.27 U/L (reference: 1.0-10.0 U/L) Prenatal blood test: Free hCG 10.00 U/L (reference: 1.0-10.0 U/L) Urinary creatinine: 1.00 (reference: 0.80-1.60 U/L)	
Page 1 of 2 printed on 12 June 2013 - Aggravated Pregnancy scanned on 05 June 2013	



## International Standard

Software used in a clinical environment has to fulfill the highest quality standards. Astraia is classified as a medical device Class IIa, and in some countries as IVD, so we know one thing is key: medical software has to be safe.

In addition to regular internal quality audits, we undergo an annual external audit undertaken with our local authority to make sure all our processes are flawless. There is no room for failure.

Our products are used by customers all over the world and are fully translated into more than 20 languages. It is of utmost importance that each language meets the exact same high criteria to ensure each patient receives the best treatment possible. We put a lot of effort into the detail and strive for absolute consistency. Without exception, all our translations have been performed by native medical professionals of high repute within their own countries. Furthermore, translations are only accepted following a strict quality assurance procedure. We are very proud to have established this unprecedented standard and a unified terminology in the languages we support.

*„In 2003 we decided to setup a fetal database that could perform the 1st trimester risk calculation, and the quality assurance. astraia could offer the by far best solution (pregnancy and fetal cardiology modules). [...] astraia does what many programs claim but few really do: it supports the clinical decision process.“*

*Olav Bjørn Petersen, MD, PhD, Head of Fetal Medicine Unit,  
Aarhus University Hospital, Skejby (Denmark)*

## About astraia software gmbh

Astraia has been the market leader and pioneer in obstetric and gynaecological database applications since 2000, and throughout this time, we have established a close working relationship with leading experts worldwide and maintain a successful co-operation with Prof. Kypros Nicolaides and the Fetal Medicine Foundation (FMF), London.

This has guaranteed a continuous exchange of ideas with the international scientific community and a level of expertise that is reflected in all our products. Astraia remains up-to-date with the latest developments and recognized standards.

## World Class Customer Support

We are here to help with all of your astraia products. Our service & support team provides personal and highly-qualified assistance whenever the need arises.

With our Software Maintenance Agreement, you benefit from the latest software upgrades and remain up-to-date with the latest features and software improvements. Whether you need our hotline service, remote support or on-site training, we are available to ensure optimal communication and a quick and efficient solution.

For more information contact us at [sales@astraia.com](mailto:sales@astraia.com)

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