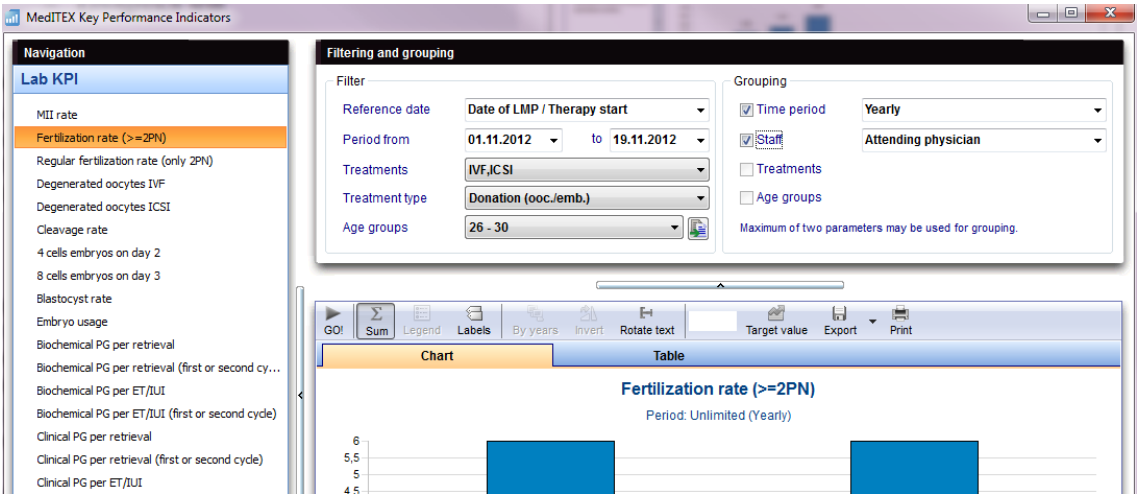
MedITEX IVF Release Notes

Version 2.0

Features

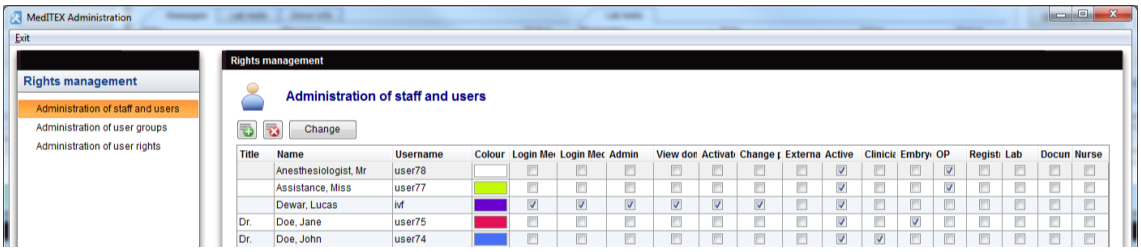
1) New modules:

a. The new tool **MedITEX KPI - Key Performance Indicators** – integrates, in the background of your system, different data sources (Lab, Cryo, Management, etc...) and allows various statistical analyzes in real time. It recognizes progress, but most importantly, it identifies setbacks in their early stage.



➔ Follow this link to learn more about it.

b. **MedITEX Administration** is another new module, which centralizes the management of users, data, and database maintenance. It allows administrators to create, delete and edit users, their permissions and members in self-defined groups.



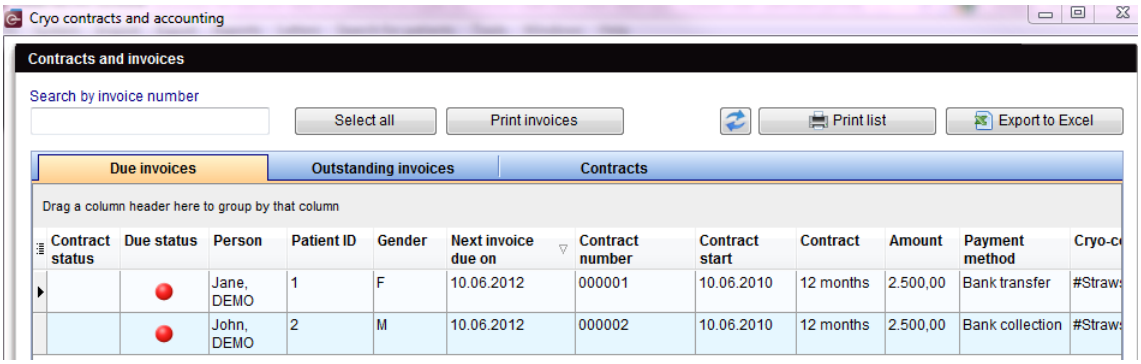
➔ Detailed information is available here.

c. The new module **MedITEX DocLink** allows for a quick and easy importing of documents, pictures and various files in the different areas of MedITEX IVF. The imported files can either be sent with a right-click of the mouse to MedITEX DocLink or can be dragged and dropped into an opened MedITEX DocLink window.

➔ Click here to read more details.

2) General Functions:

a. Through the new feature **Cryo contract and accounting**, you can create with just a few mouse clicks, cryo contracts, invoices, lists of overdue invoices and reminders, as well as managing and printing them.

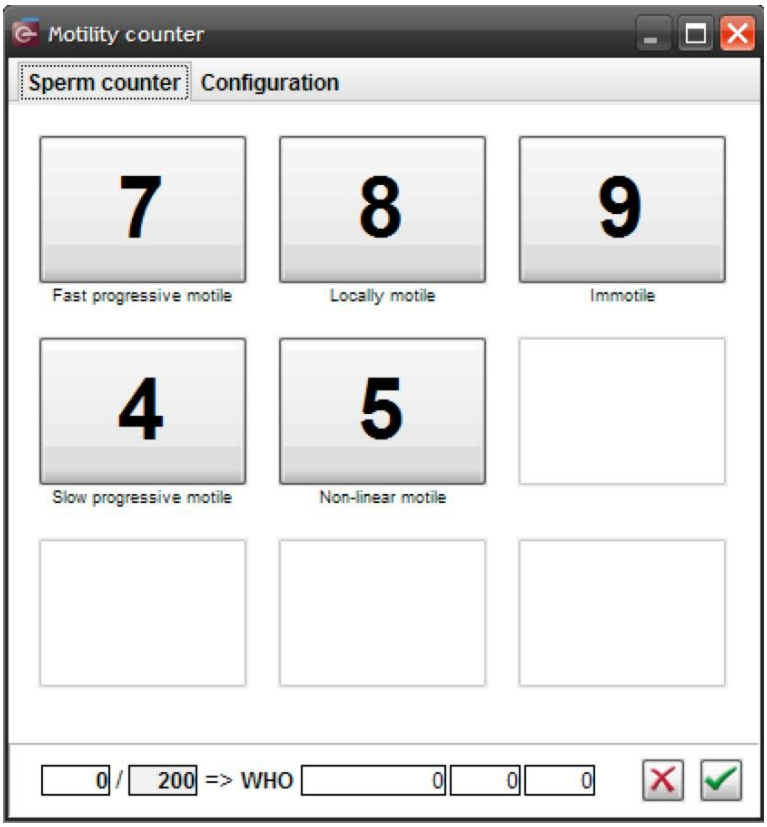


➔ Please follow this link to learn more about this important MedITEX functionality.

b. With the new **Motility Counter** it is not possible to count different categories of motile sperms directly from MedITEX. Just use the numeric keys on your keyboard – or an extra numeric pad connected over USB port to a computer – to count Progressive- Motile, Non-Progressive motile and immotile sperms and obtain total counts and percentage values in MedITEX automatically.

Fully configurable, the new Sperm Motility Counter allows each user to define personal keyboard layout. Counting range is set by default to 200 and can also be adjusted individually.

➔ Detailed information about new Motility Counter is available here.



c. In the new view **Cycle Summary**, all relevant data of a patient or a couple are shown. If the user has the right permissions, it can the layout of the list.

➔ Find out more here, about MedITEX Cycle Summary.

d. In demographics, medical history, lab. diagnostics and examinations, the attending physician (agent in carrying out medical history last) will now appear to the right of the accounting type.

e. New feature enables **SMS notification**. Using a Skype account, send SMS from MedITEX to patients. This option is in the menu bar placed in "New Message".

➔ Click here to get more information about.

f. The mobile number of the patient was added to the description box (in gray).

g. Abortions are indicated in the therapy summary (start screen) in the column "children".

h. Auto-complete for Username at the Login window and selection of users.

i. It is possible for every employee to set the colour that will represent his/her activities throughout the program.

j. The picture of the patient can be enlarged in every area of the program by double-clicking it.

3) Medical history:

a. Supplement in the mask of the medical history of the woman: data on births (gravida/para) were extended with abortions, induced abortions and Ectopic pregnancies.

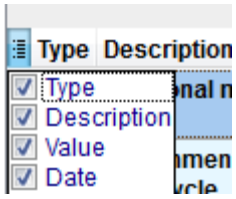
b. Additional free text fields were introduced in medical history:
   i. Sterility factors of the female.
   ii. Previous illnesses of the male.
   iii. Fertility impairment factors of the male.
   iv. All fields have the option of auto-complete.
   v. Free field "Medical reports / Remarks".

c. Options added and changed to the "Menstruation" area at the "General" tab.

d. In the “Med. history” button on the male, in the second tab under "Performed treatment", the fields Anti-inflammatory actions, Hormonal treatment and Surgical will only accept a year value.

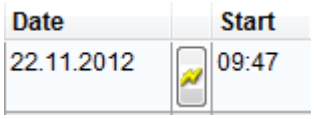
4) QM/Free fields:

a. Any user can choose in the QM/free fields, which columns should be displayed. The configuration of each user is stored individually and you can adjust the columns by clicking on the button on the left of the list header.



b. The option to add a voice memo will always be available at the QM window.

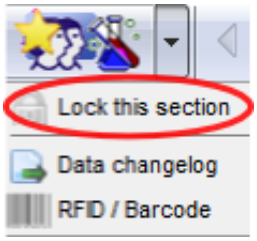
c. Pressing the lightning symbol will auto-complete both Date and Start fields.



5) Data security:

Three complex functionalities were implemented to ensure the reliability, confidentiality and security of data.

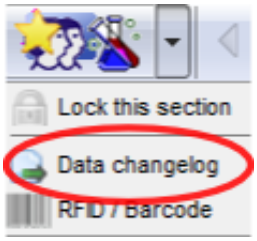
a. **Data lock.** To prevent accidental or malicious deletion or changing of data, there is now the option of locking individual data, entire therapies and areas. The unlocking of data can only happen through entering the password of the person who had locked it or a user with admin rights. You can lock the data by clicking on the arrow next to the QM button. To lock entire therapies, click on this symbol .



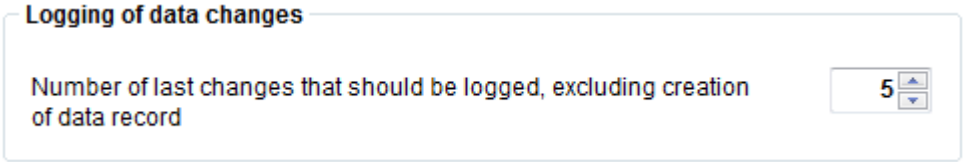
➔ Learn more about locking of data here.

b. **Change logs.** Through the change log, you can visualize all modifications that were made. You can also access this functionality at any point over the QM button. The changes are displayed on a list and will present the following information:

- Modified date;
- Name of user;
- Field names of the changed data;
- Area name;
- Date of the record.



The five last changes of each record are documented. If a sixth change happens, the oldest saved change will be deleted in the log. The number of recorded changes can be set under System -> Configuration -> Settings -> System -> Functions -> General:



➔ Changes on the demonstration user "ivf" are never documented. To ensure complete data security, we recommend blocking "ivf" in MEDITEX Administration by removing all rights assigned to it. Therefore, each person using the tool should have their own account created by an administrator.

➔ More information about it can be found here.

c. **Rights management.** An important extension of MedITEX system is the rights management. The user with administrative privileges can now edit the rights for the

viewing, reading and/or writing information for different individuals or groups of people for all MedITEX areas.

➔ Here you can learn how to assign such rights to your employees: MedITEX Administration instructions.

6) Semen analysis:

a. The morphology of a field "multiple defects" was added.

b. If the checkbox “sperm from donor” is selected, this information will be displayed at the column "Collection method".

c. **Quality assurance.** The details of the workplace, examination name and examination method have to be entered before the counting starts. Before, they have to be defined in the settings. It is possible to enter and save the concentration, motility and morphology separately. For a better understanding of the calculation method, formulas were added to the Results tab. A long-term evaluation shall be given separately for each measured variable. The program contains an automatic reminder.

➔Further information is available here.

7) Donation:

a. The **sperm donor** area has been completely revised and expanded with personal characteristics of the donor and other data and functions. In patient management/woman you will find a new green highlighted field. Click on it to get information on the donation.

b. (Only for the UK version!)
Entries in Ethnic groups in person and donor have been replaced: White British, White Irish, Any other white background, Indian, Pakistani, Bangladeshi, Chinese, Any other Asian background, Black Caribbean, Black African, Any other black background, White & Asian, White & Black Caribbean, White & Black African, Any other mixed background, Any other ethnicity.

➔ More information about sperm donation functionality are available here.

Automatic unlocking of donor sperm samples if storage is greater than 180 days, HEP B, C, TPHA and HIV negative. Otherwise, the samples for the duration of the quarantine will be locked. The quarantine period (180 days by default) can be changed in the program settings.

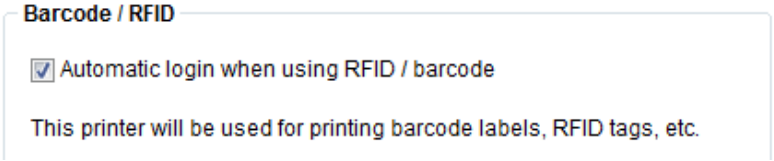
8) Transfer:

a. In the transfer mask, an additional (second) transfer date can be documented. This date is also in the Report editor under Therapy -> Transfer to find. This date is not linked with embryos. The crucial date is only the first date of transfer.

9) RFID/Barcode:

a. Existing codes can be linked to a material. A button activates the "scan" function so it is possible to read a bar code and assign it to a material.

b. The users who are using RFID technology can log in automatically into the MedITEX system:



10) <u>Laboratory diagnostics:</u>

a. Expansion of laboratory diagnosis of males with “Multiple entry” button.

b. When creating a "new sample" the option "other" was added in order to create a laboratory sample without pre-defined parameters.

c. In the area of laboratory diagnostics man/woman in the menu bar, a new button "**lab order**" was added. With this function, it is now possible to read the sample number using a barcode scanner and create a corresponding lab order for the lab.
You can create new lab orders in the opened window. Enter the order number and if necessary, a comment. The other columns are added automatically.

11) <u>Cryo:</u>

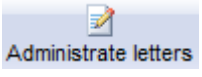
a. New Field "Stored by" in Cryo Gyn and Cryo Andro input masks were implemented to ensure the accurate documentation of the samples.

b. Change the layout in Cryo Gyn for a better overview of the reserved straws and the history.

12) <u>Report editor:</u>

a. It is now possible to create lists and analyzes to see whether documents are already available and which status is assigned to them. This information can be found at the Report editor under “Administration” -> "Documents."

b. The letter templates can now be edited directly in the Report editor and in the program preferences. Please use this button:

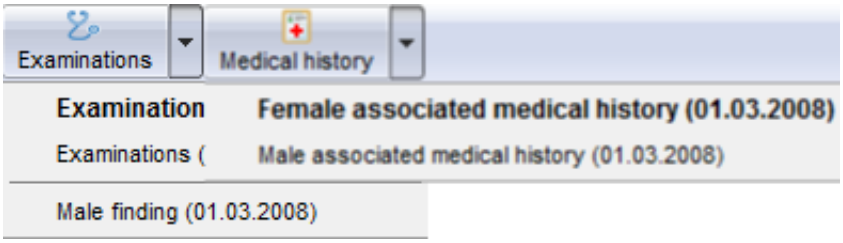


13) Therapy:

a. Window for creating a new therapy (treatment details): The input field "Survey ID" has been extended to another entry field "Randomization group".

b. In the new toolbar, it is possible to open by pressing the "examinations" all examinations of the patient pair. Clicking on it opens the newest examinations. When clicking on the arrow next to the button, it is possible to select older ones chronologically.

c. Also, on the menu bar of the therapy window, a new button "Medical history" was added. From this button, you can have the last medical history displayed.

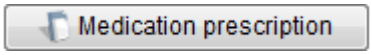


14) Pregnancy:

a. It is now possible to document the pregnancy ultrasounds separately. Under Therapy -> Pregnancy -> "**Ultrasound**" you have another way of documenting the US of a therapy weekly.

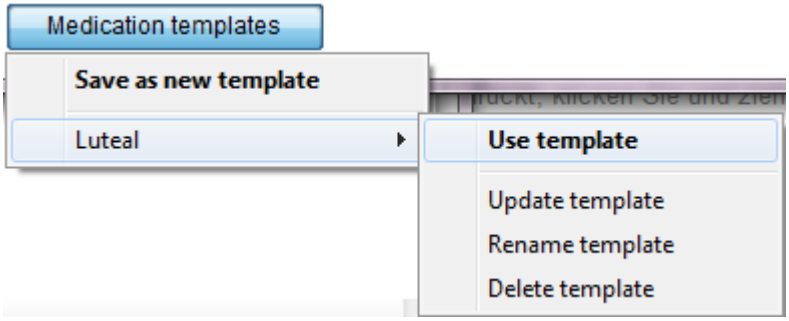
b. If a biochemical pregnancy was found and afterwards no clinical PG ("No PG") was detected, a new information will be displayed at the cycle overview as: "No (Biochem)".

15) Medication:

a. **Medication prescription.** There is now the possibility to order new drugs immediately after the prescription of those medications, or during treatment planning. Please use the corresponding button on the medication mask. 

b. “Drug code” was added to the Drugs editor in the Settings.

c. The administration of medications was made easier with the addition of the button "Medication templates". Here you can create a template from the existing medication or save it for future prescriptions.



16) **Translations:**

a. Some names have been deleted in MEDITEX EN versions and changed: Deleted: Nose, Shoe size, Bra size, Forehead, Nose shape, Amblyopia, Dress style. Changed Deleted names: occupation -> learned profession, bank code -> sort code, family status -> marital status, Therapy -> Cycle, Spermiogram -> Semen analysis.

Bugs

A number of diverse bugs has been fixed, among others:

1) **General:**
   a. The overall responsiveness of the program has been improved.

2) **Cycle:**
   a. The speed of dragging with a CTRL + click has been improved.
   b. Problems with the transfer of drug entries were corrected.
   c. Security check when editing billing type of a patient and it is different for the individual cycle and the medical history.

3) **Cryo:**
   a. Problem when opening the QM fields in the history of Cryo storage has been solved.
   b. Transferring of cryopreserved SPs of a sample ID was corrected in the Sperm cryo storeage.

4) **QM / free fields:**
   a. List of material entries is alphabetically sorted.
   b. Queries with QM entries that have a start time later than their end time now display the correct result. The times are also listed.

5) **Quality assurance:**
   a. Floating point numbers are allowed in the counting fields. At WHO A, the number 0 can be set as result count.
   b. Concentration will only be retrieved after entering both counts and they are correct.
   c. Now it is possible to select a staff member to perform the counting.

6) **Report editor:**
   a. The fields "Sum of thawed cells" and "Planned start stimulation" were added in the Report editor.

7) **Culture:**
   a. The thaw day can be manually set to day 0.
   b. Some names of methods and terms were changed.

c. The reason for aborting "Pronuclear stage arrest" is now accepted.
d. Allocation of oocyte to the incubator was corrected.

8) Pregnancy:

a. At the pregnancy calculation in the thaw cycles, the exact age of the embryo is taken into account.

9) Plausibilities:

a. Problem solved when displaying plausibility messages.

10) Ultrasound:

a. The entire ultrasound image is shown in the preview.

11) Donation:

a. The Anonymous-ID of the donor is indicated in the tab "Donor info" in cycle overview and in "Treatments and treatment semen analysis" under Culture. It is only visible if an Anonymous ID had been created for this patient and the option is set in the system settings (System -> Configuration -> Settings -> System -> Functions -> Donation).
b. Changes to the "visibility" of the donation area for each patient.

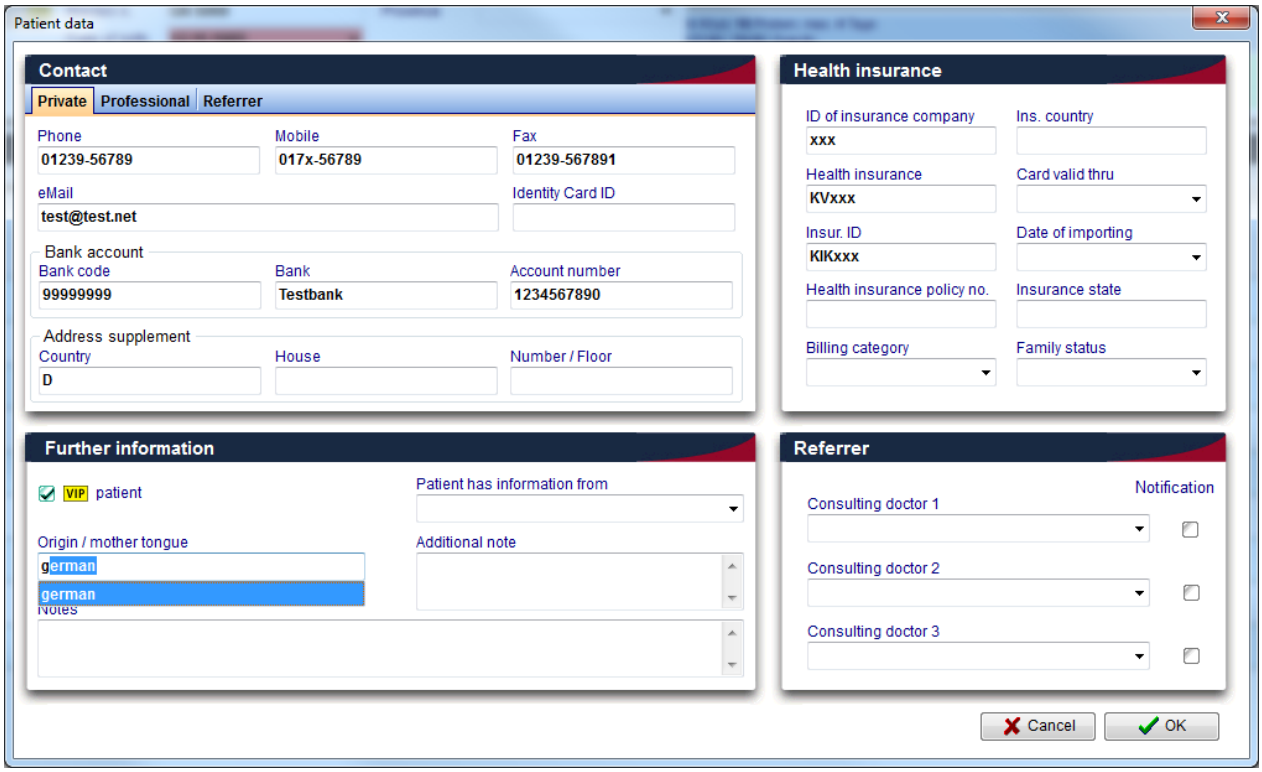
12) Only for Italy:

a. It is possible to transfer five embryos.

Version 1.3.0.2

Features

It is now possible to document the mother tongue of the patient. The new field, which also has the text completion functionality, has been integrated into the area “Further information” in patient data.



Bugs fixed

Different bugs and problems have solved.

Version 1.3.0.0

Features

1.) General features:

a. An automatic text completion feature was integrated. In many text fields the program will offer entries previously entered in that field, filtered according to typed keys. Additionally, in note fields it is possible now to use the key combination Ctrl+Space to open a drop down list with all previously entered texts, filtered also according to typed keys.

b. The new interface with “Labotect” incubators allows the automatic import of incubator protocols in MedITEX IVF.

2.) Cryo storage:

a. Cryo storage mask was extended with a number of new fields, including the freezing and thawing methods and additional straw colour.

3.) Home screen:

a. Among other important data from the medical history, the name of attending physician is also displayed.

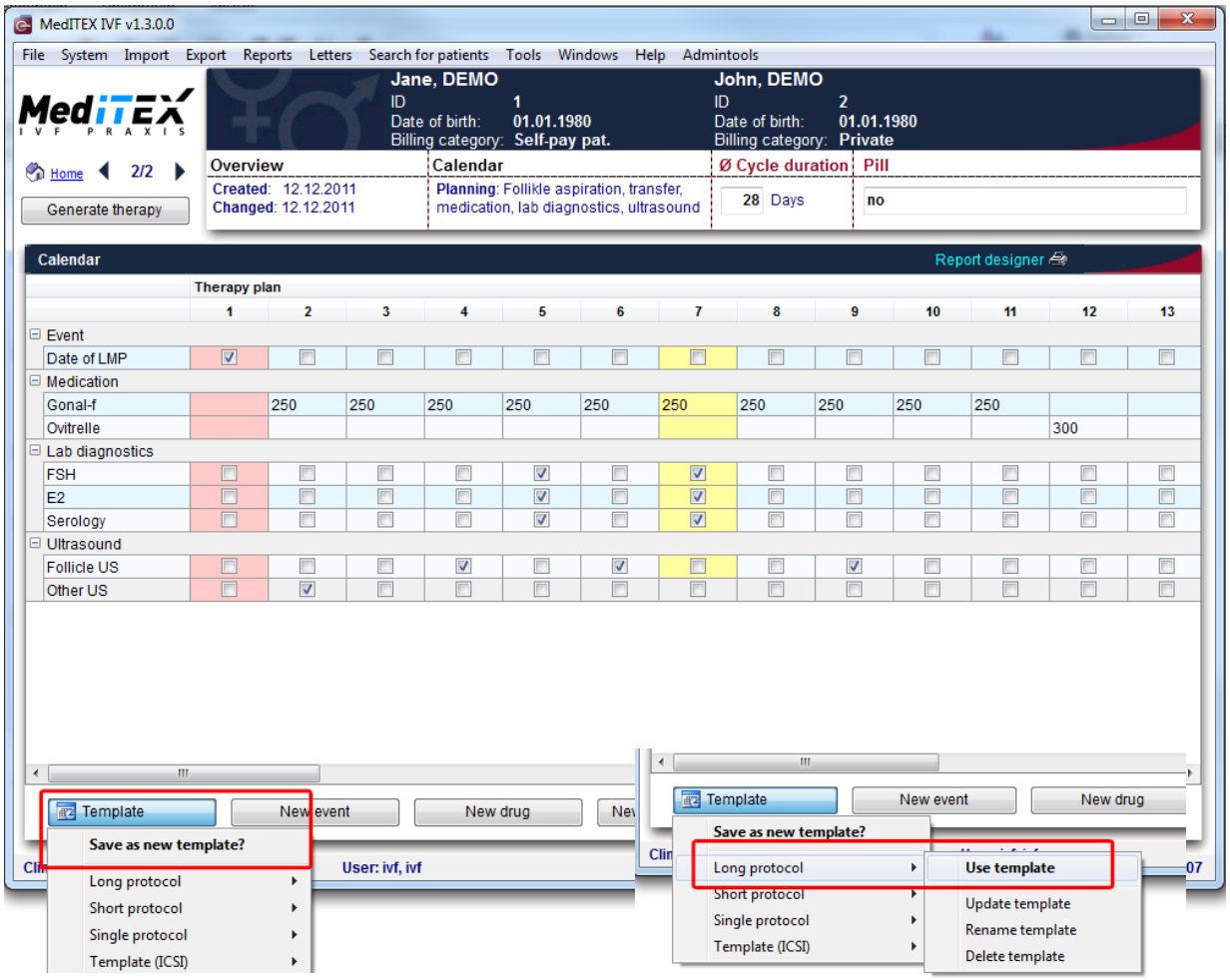
FIn: 01.03.2008 | **Att. phys.:** Doe, John | **M.hist.:** 01.04.2010 | **Pretreat.: OP** 0, **OI/IUI** 0, **ART** 0 | **CFTR:** Not determined **Chromos.:** Not performed **Weight:** 60 [kg] | **BMI:** 19,6 **Prev. ill.:** Nicotine intake

b. Therapies (cycles) are per default ordered by start date.

4.) Planned cycles:

a. In therapy planning and in the form for creating new therapies it is now possible to choose a treatment protocol.

b. The new functionality in calendar area offers the possibility to save the complete current planning as a template for future use. In this way, using the button “Template” in the lower left corner, the current plan for drugs administration, lab and ultrasound examinations, and other important events can be saved in one cycle and easily restored in another, without the need to enter all the data again.



c. After creating an active cycle out of planned therapy, the days with planned laboratory and ultrasound tests will be marked with a small red triangle and a hint “Examination planned”.

5.) Transfer:

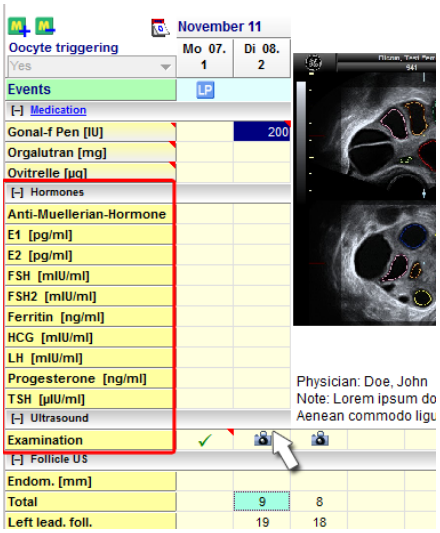
The development stage of the embryo is now also explicitly shown: “4 cells”, “8 cells” etc.

6.) Semen analysis (spermiogram):

a. It is now possible to add videos and various documents in spermiogram.

b. A dozen of new fields considering analysis and morphology of the sperms have been added.

7.) Cycle overview and lutheal phase:



a. Between Hormone and Follicle U.S. the new rows "Ultrasound" and "Examination" were inserted. In this way it is also possible to enter ultrasound data not directly related to follicle examination. If an image is available, a camera icon will be shown. If no image is available the green check symbol is displayed.

b. In ultrasound form it is possible to enter the physician and the note, and to attach videos.

c. Physician name, note and ultrasound preview image will be shown in a hint, if the mouse stands over a cell with a camera or check symbol.

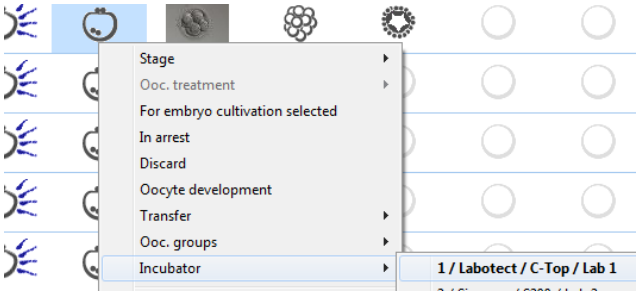
d. The parameters shown in the overview are no more constrained to 5 most important hormones. From now on it is possible to select any laboratory parameter for display in the cycle overview (see point 10.b.ii). The parameters are grouped automatically into groups that can be collapsed and expanded at will.

8.) Culture:

a. New embryo stadium is introduced: “Start of cavitation”, between “Morula” and “Early blastocyst”.

b. Besides images, it is now possible to attach videos also.

c. For each oocyte/embryo it is now possible to enter the incubator data, either over the context menu in the graphical culture representation, or in the development form for each embryo. Information about incubators used in the clinic can be defined in system settings.

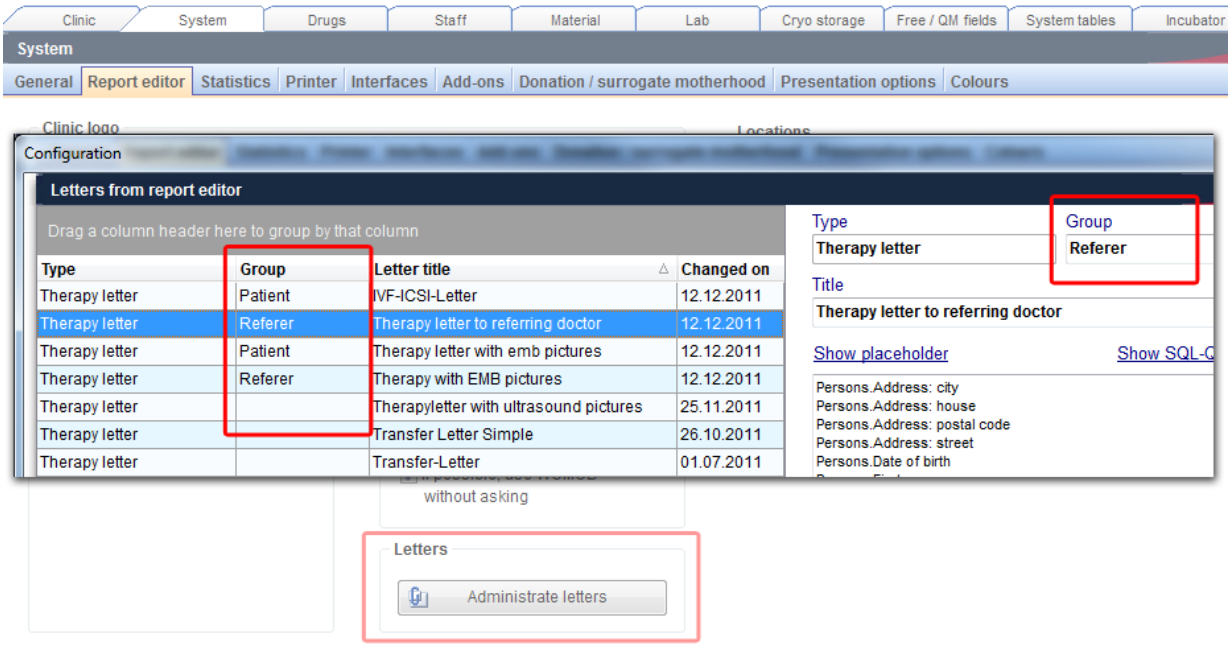


9.) Patient data:

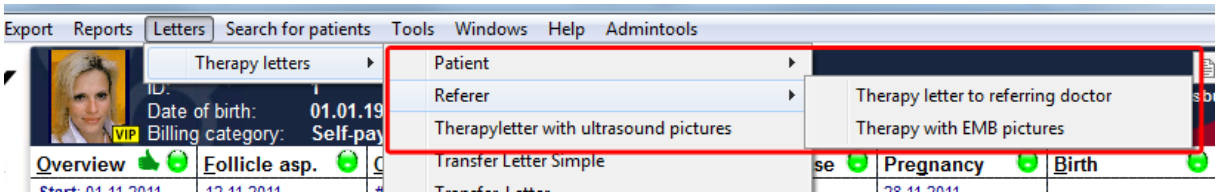
Two new fields have been added: “Birth place” and “State".

10.)System settings:

a. Grouping of letters: in the administration of report editor letters (Settings→System→Report editor→Administrate letters) it is now possible to define a “subgroup” for each letter. It is enough to write the group name in the field “Group”, or to select one of the existing ones.



The letters belonging to the same group will be grouped in a submenu item with the group name.

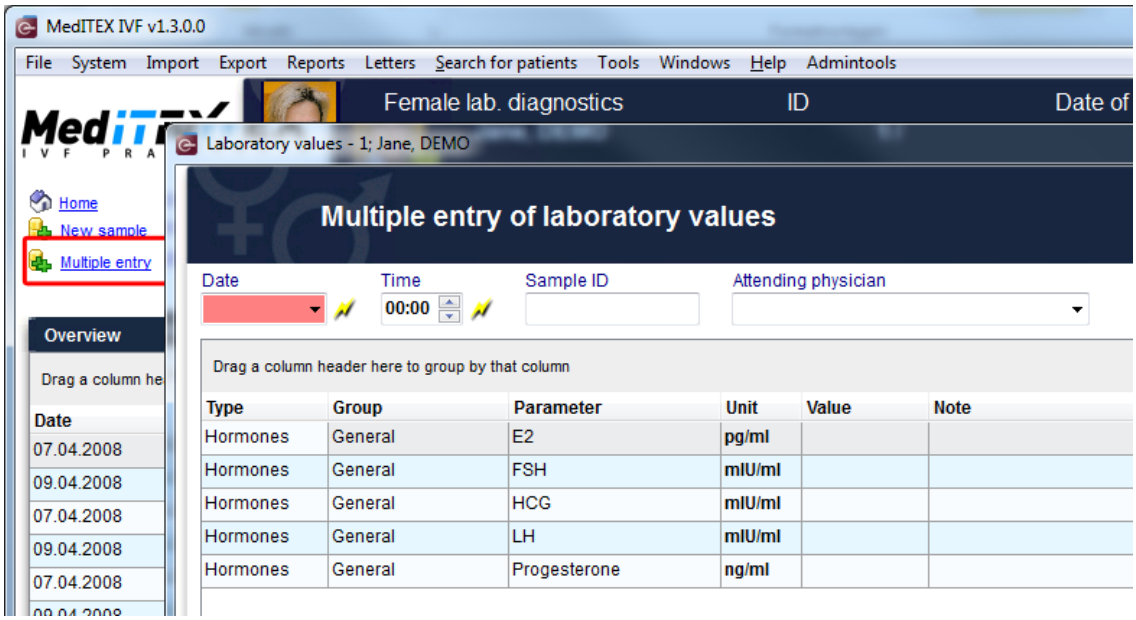


b. In the "lab" tabsheet it is now possible for each parameter to define the following:

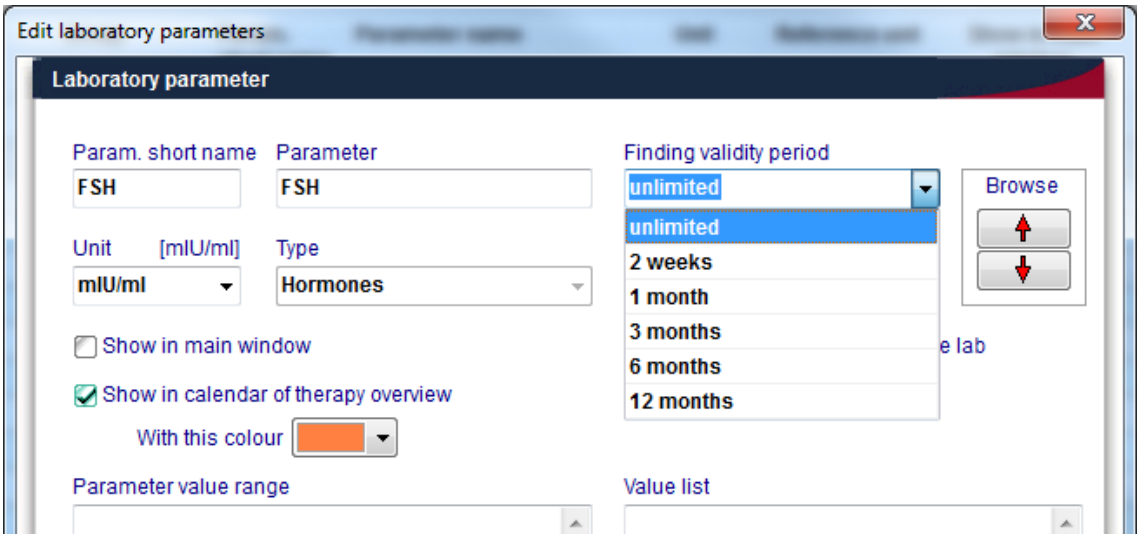
i. If a parameter should appear in the home screen, in the list of lab tests. The result of the most recent examination will be shown.

ii. If a parameter should appear in the calendar of therapy overview (as described in the point 6.d).

iii. If a parameter should be offered in the mask for fast entry of more parameters at once, "Multiple entry in laboratory values", in laboratory diagnostics.



iv. Validity period for each parameter. The choices offered are "unlimited", "2 weeks", "1 month", "3 months", "6 months" and "12 months". If the validity period of a parameter shown in the lab diagnostics or in the home screen has expired, or the parameter has not been examined at all, the parameter row will be marked in red.



c. The item list of the field “Group” for lab parameters can now be freely extended by user defined groups, in “System→Settings→System tables→Laboratory parameter: group”.

d. In the clinic data, it is now possible to enter the clinic’s state/province. Provinces can be added/edited in “System→Settings→System tables→Provinces”.

e. Different personal customizations can be saved per user, in the “Edit staff data" form of the staff area. So it is possible to set the visibility of “up/down” buttons in the table representation of culture, or to define the size of the preview images in hints (embryo images in culture and ultrasound images in therapy overview).

f. The basis for the automatic calculation of the current pregnancy week, abort week and birth week can be set as
   - Fertilization day (default), or
   - Reference date (Last menstrual period or treatment start date).

11.)Report editor:

a. A certain number of tables and fields in report editor have been revised, in order to ease the creation of user-defined queries. As a consequence it may happen in rare cases that some existing queries can no more be executed.

   If you encounter such a problem, please contact directly the software support. We will help you to restore the query in question. The support can be reached

Mon. to Thu.	**from 8:30 CET to 17:00 CET**
Friday	**from 8:30 CET to 14:00 CET**
Hotline	**+49 941 56 99 87 70**
Email	support@critex.de
Fax	**+49 941 56 99 77 40**

b. In the report editor results window it is now possible to refresh the result with the "Refresh" button, without the need to go back to query design window and run the query again.

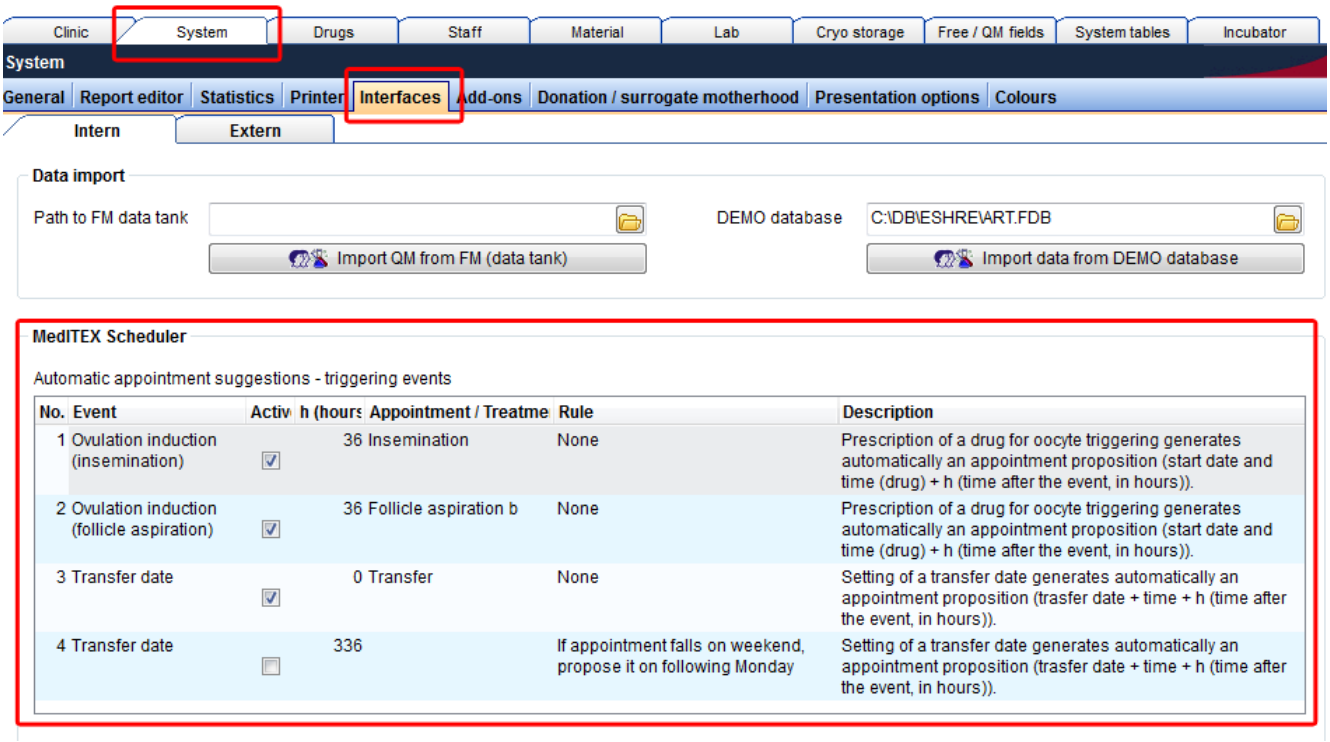
c. For letter templates created in Word module there are several new "additional placeholders" now available: for ultrasound images, similarly to embryo images, and for current date and time.

d. To facilitate evaluations over different couples, the new field "couple" in therapy and inseminations table was introduced.

12.) System settings – interface to MedITEX Scheduler:

Automatic generation of appointment proposals in **MedITEX IVF** (possible only in conjunction with the **MedITEX Scheduler** - *see also feature point 16*):

In "System settings→System→Interfaces→MedITEX Scheduler" you will find a list of certain events, which trigger the automatic generation of appointment proposals.

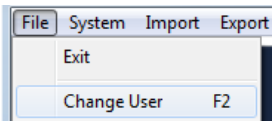


In this way it is possible to define appointment proposals for insemination, aspiration, transfer, or pregnancy test. If an event is triggered, an appointment proposal will appear in MedITEX Scheduler, with the patient name, estimated appointment date and time, and treatment. The administration of an oocyte-triggering drug, for example, will generate an appointment proposal for oocyte aspiration, which should take place 36 hours after the drug administration. In another example the setting of a transfer date in MedITEX IVF in the future will generate a transfer appointment proposal in MedITEX Scheduler.

The user can change the following settings for each of predefined events:

- **Active**: Defines if an event triggers an appointment or not.
- **h (time after the event)**: Defines the start of the appointment, in hours, after the date and time of the triggering event.
- **Appointment / Treatment**: All treatments defined in Scheduler can be chosen here.
- **Rule**: An additional condition for the start time of the proposed appointment.

13.) Main menu:



Over the menu item "File→Change User" users can now only switch to another user, or log off. In order to continue using the program with the same user it is necessary to enter the password first.

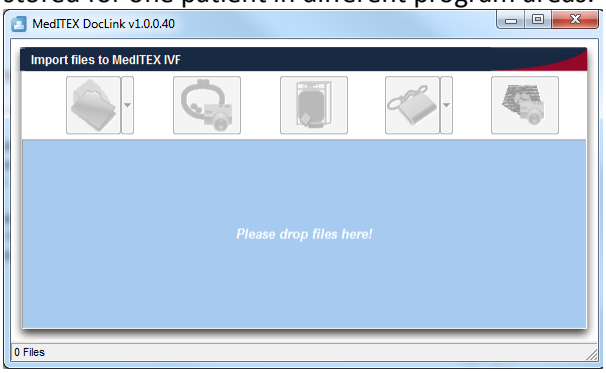
14.) Interfaces:

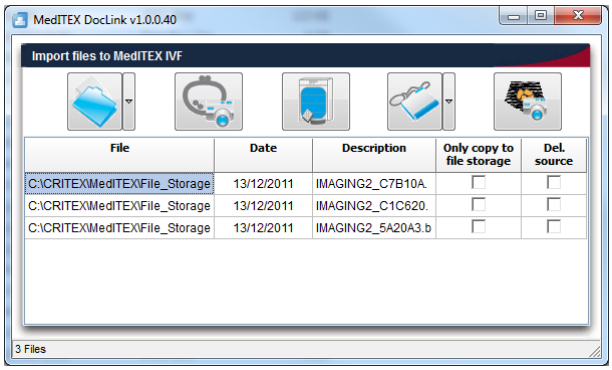
a. Interface to **Synlab**: Web orders of laboratory parameters with Synlab.

b. **MedITEX DocLink**

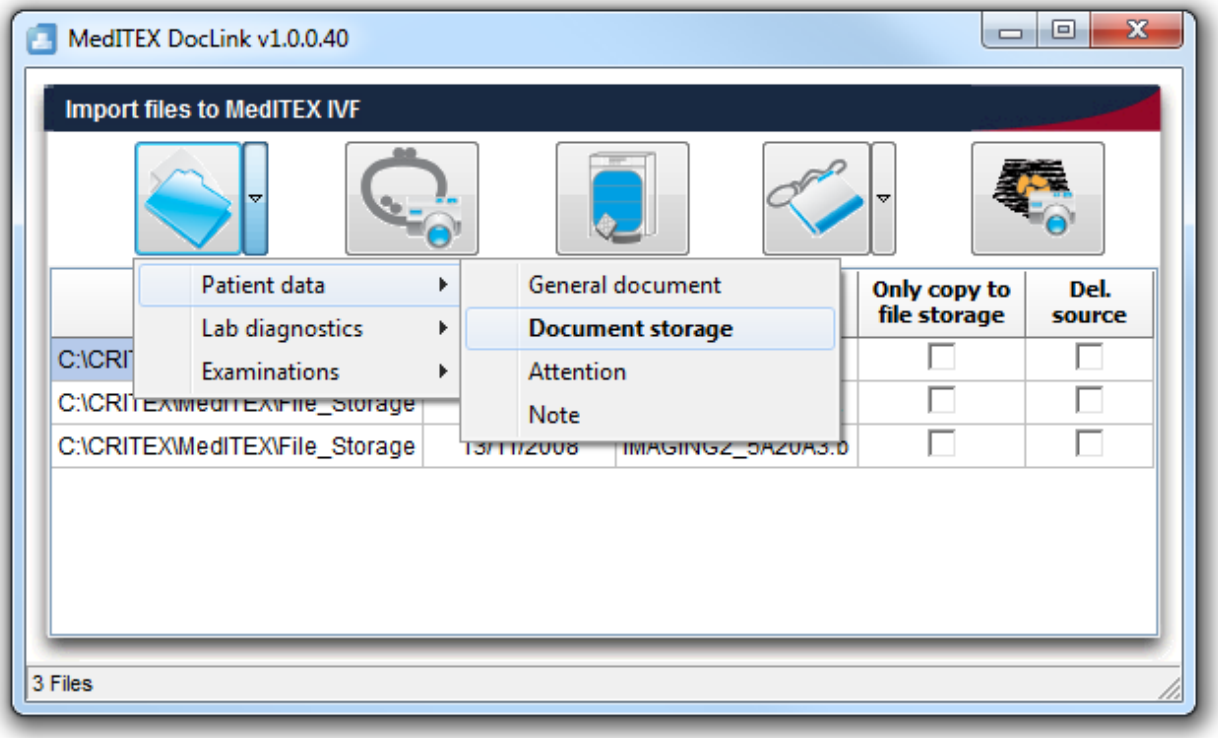
The new Add-On "MedITEX DocLink" enables quick and easy importing of files into the different areas of MedITEX IVF.

The files to be imported can be sent with the right mouse click directly to MedITEX DocLink. The other possibility is to drag and drop them directly into the opened MedITEX DocLink window. Using the buttons in top area the document(s) can be stored for one patient in different program areas:





1. Patient document storage
    a. Patient data (general document, attention message, note)
    b. Laboratory diagnosis (grouped after laboratory values)
    c. Examination (in all existing examination types)
2. Oocyte/Embryo development
3. Incubators
4. Semen analysis (general, native, preparation)
5. Ultrasound examinations

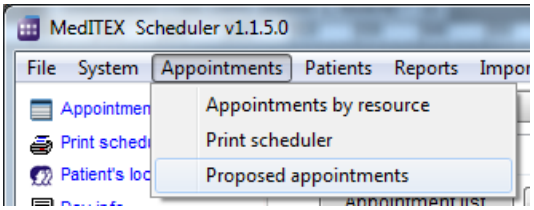


15.) Double Witnessing: statistical examination of 50 spermiograms

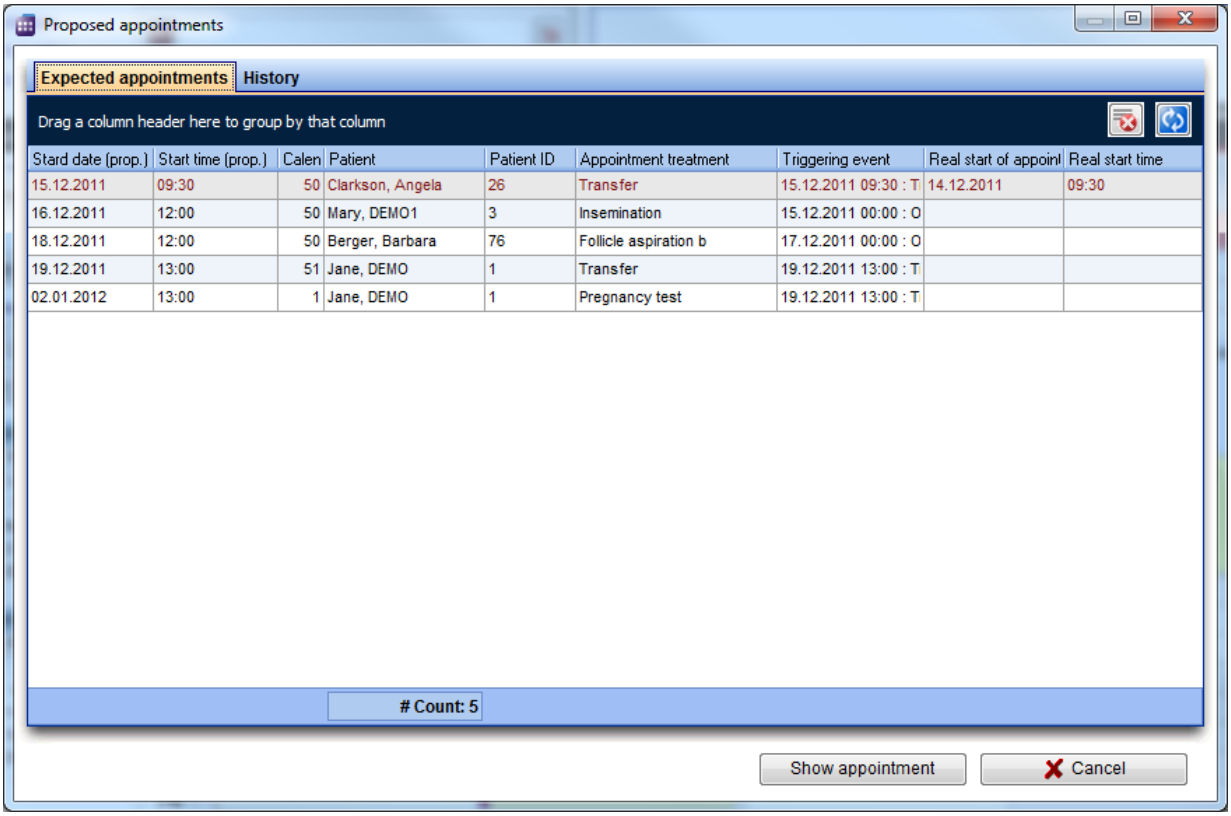
Each 50 pairs of native sperm counting values (documented in 50 double-witnessed semen analysis) will be automatically checked based on a predefined set of statistical rules. If the assessment does not give a satisfactory result, the Double witnessing function will be blocked for further use and can only be unlocked by an authorized employee. The results of all automatic tests including the individual values of 50 sperm counting values can be reviewed over the menu "Reports->Double witnessing administration". In this module it is also possible to unlock the Double witnessing functionality, once when it was blocked by the system. The new staff function "Activate Double witnessing functionality" in "System→Settings→Staff→Edit Staff", determines whether the employee is authorized to unlock the Double witnessing function.

16.) MedITEX Scheduler

a. **Automatic proposal of appointments:**



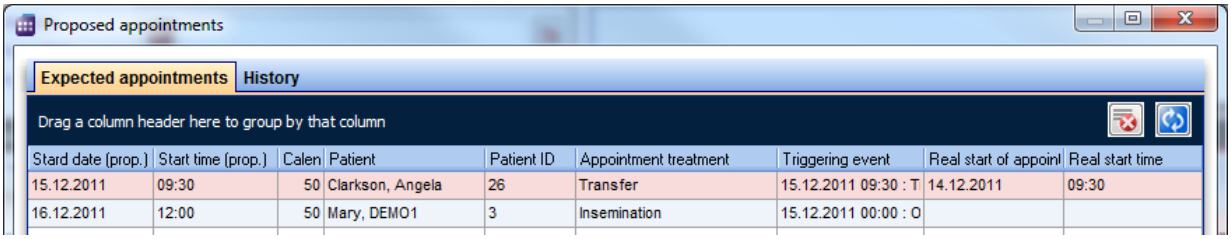
An automatic generation of proposed appointments is now possible (e.g. for aspiration, insemination, transfer etc.). If the appropriate rules have been defined and activated in system settings of MedITEX IVF (see also point 12), the corresponding event will automatically generate a proposed appointment in the scheduler, if the date is not in the past. All proposed appointments can be reviewed in MedITEX Scheduler under "Menu→Appointments→ Proposed appointments".



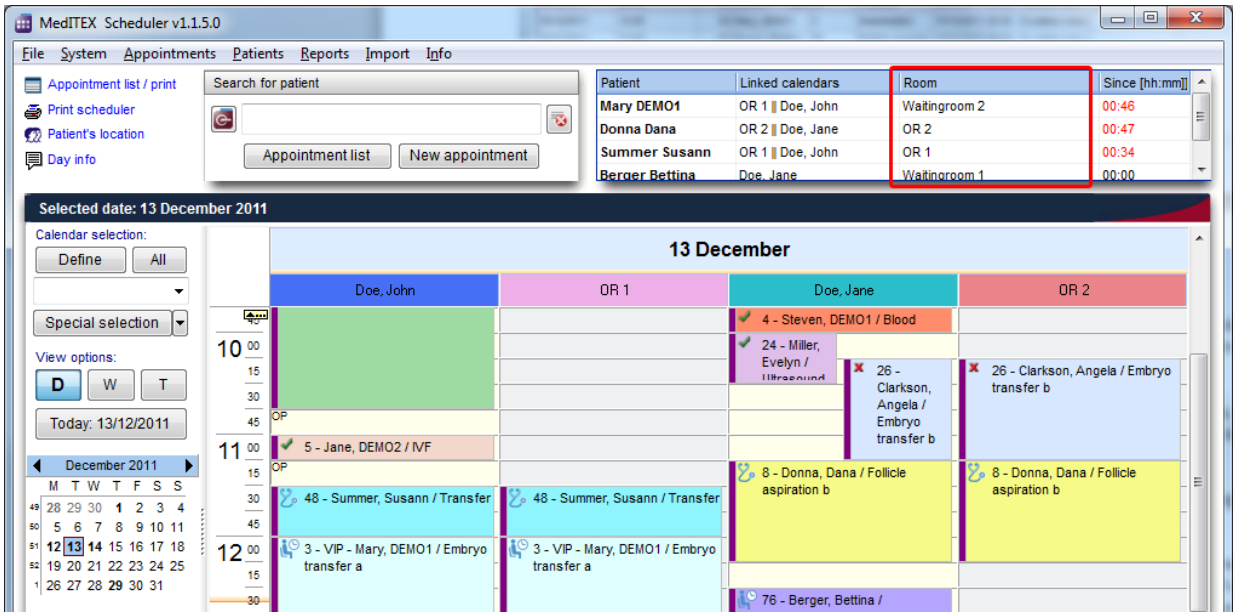
By double clicking on a cell (or by clicking the button "Take over appointment"), the appointment input mask will be opened with the proposed data - patient, treatment, appointment start – already filled out, if no active appointment already exists. User can now edit the appointment data and save it, thus creating an active and "real" appointment. The corresponding proposed appointment will automatically be transferred to the tab-sheet "History", with the information about the start of the

generated appointment. By double-clicking the line with the proposed appointment to which an active appointment already exists (e.g. has already been generated), the “real” appointment will be opened.

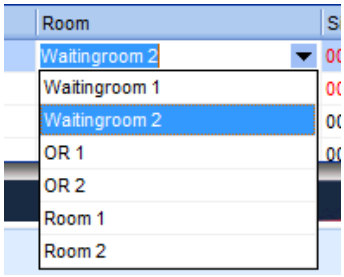
If the triggering event in MedITEX IVF has changed in time, the corresponding appointment will be automatically transferred back to the tab-sheet "Proposed appointments”, and marked in red (only if the corresponding “real” appointment lies still in the future). In this way the user can immediately react if something changes in the planning.



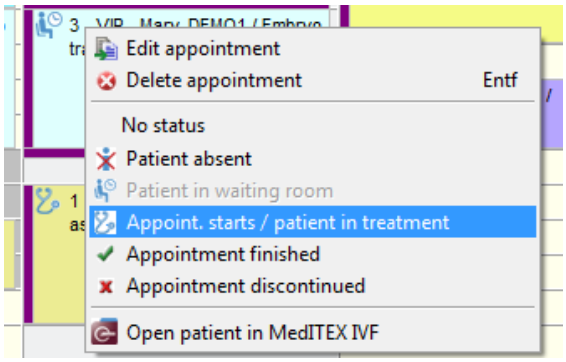
b. **Patient location:**

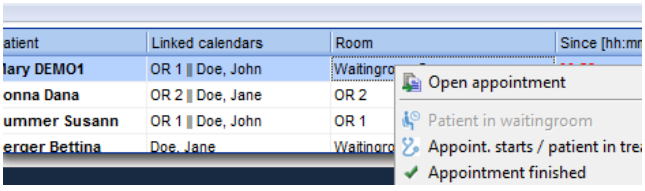


The virtual waiting room has been expanded and converted into the “patient locator”. In the column "Room" it is now possible to select a room where the patient is presently located. In the column "Since [hh:mm]" the time is displayed, since when the person is in that room.



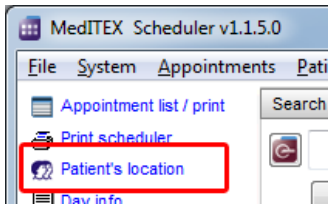
As before it is possible to drag the whole appointment and drop it in the patient location area. The “Waiting room 1” will be automatically entered in the location column, and the appointment status will be set to “Patient is in waiting room”.

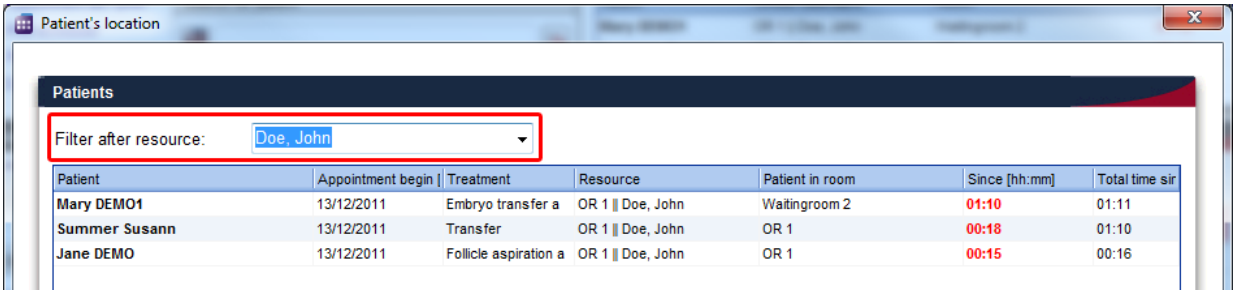




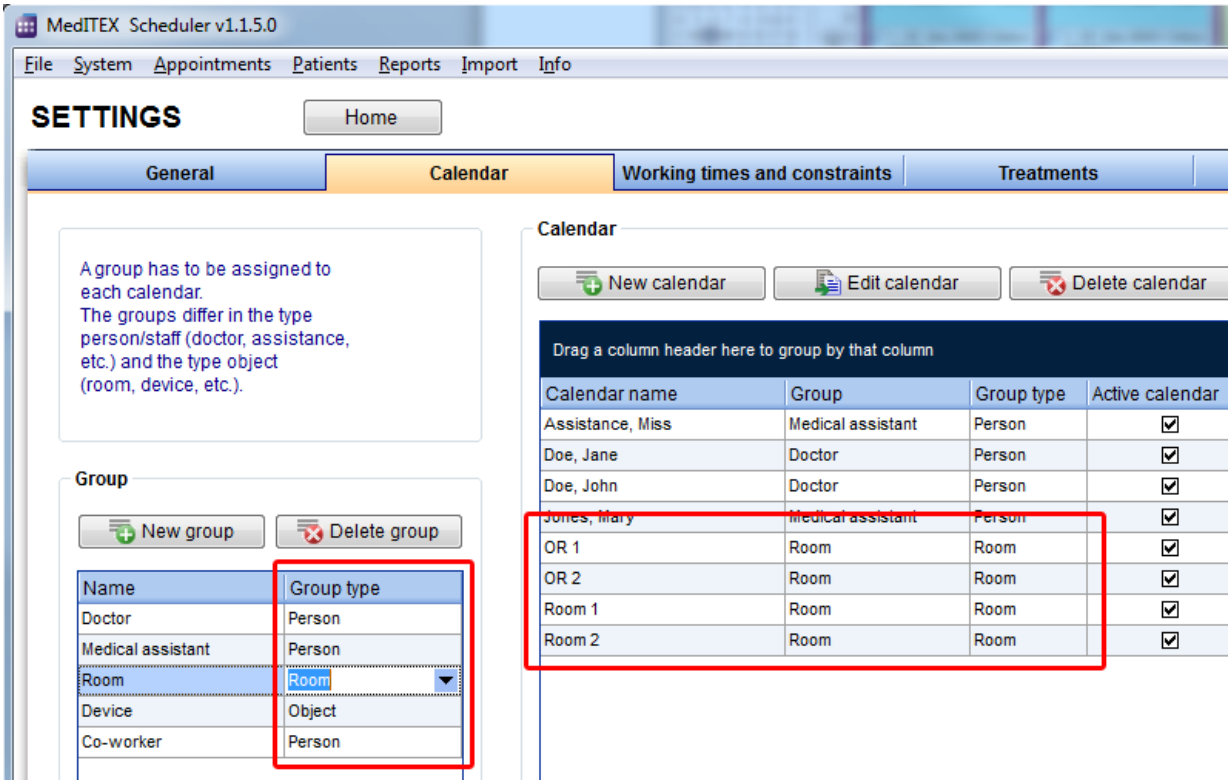
The status of the appointment can be edited via the context menu that appears on right-clicking the appointment, or via the context menu in the patient location area.

In the details window "Patient's location", which can be invoked over the link in the upper left corner of the main window, it is possible to see more details about the actual location and appointment of each patient currently present in the clinic. Here it is also possible to filter the data by a particular calendar, so that only the appointments related to that calendar are displayed.





The rooms can be defined in the program settings (Menu: "System→Settings") as a calendar with the **group <u>type</u>** "Room". Additionally it is possible in general settings to specify the total number of all waiting rooms.



Bugs fixed

1.) Query builder:
   a. The performance of queries over inseminations was increased.
   b. The new fields "used drugs" in the fields of therapy and inseminations also allows the search for therapies in which a particular drug was (or was not) used.

2.) Semen analysis:
    a. In the spermiogram window, the time of the acquisition is no longer doubled.
    b. The motility percentage values are now displayed with no decimal places.

3.) Therapy overview:
    a. The problem with editing and deleting of hormones after entering certain drugs has been fixed.

4.) Culture:
    a. If a 2PN-cell develops into a >= 3PN-cell, and then be set to "arrest" or “discarded”, then this cell will be added in the tabular cultural view to the field "discarded", in "2PN-selection" area.

5.) Pregnancy:
    a. Time difference between the current pregnancy week and abortion week was fixed.
    b. Refresh problems in pregnancy and birth forms were fixed.