



Matcher

IMT Matcher™ is a barcode-based electronic witnessing, labelling, scheduling and traceability system with interactive dashboards for visualisation, analysis and reporting of Matcher data

Patient Import

Customised service



"We chose Matcher because of its versatility and flexibility. We wanted a system that could be adapted to a network of different laboratories and different settings and with the Pocket Matcher unit, it was simple to install and very easy to use, especially in the isolettes."

Dr. Nicolás Prados, Ph.D.
Global Laboratories Coordinator, VIDA Recoletas Salud
Group | 4 sites | >2000 cycles | Spain





"Matcher is willing to go the extra mile and to put the work into developing the product so that it keeps up with the times"

Rebecca Holmes PhD, HCLD
Senior Vice President of Lab Operations, CCRM Fertility, USA
Group | 12 sites | >12,000 cycles | US & Canada





"In comparison to other witnessing systems, Matcher is intuitive, simple to use and easy to configure yourself"

Simone Koch
Head of IVF and Andrology Laboratory,
Kinderwunschzentrum Ludwigsburg, Germany
Private | 1 site | >1,000 cycles | Germany



Training

As part of implementation, we provide full training for users and administrators of the system.

We have a full suite of e-Learning modules tailored for users' job roles and every user's learning journey is tested and monitored.

There are online user guides and help functionality available from within the software.

Product Development

At Matcher we have a continual programme of in-house product development as well as feeding-in specific customer requests and rapid response to changing industry dynamics.

Technical Support

Responsive - We commit to providing the highest levels of service and responsiveness, whatever time of day or week, with expert support provided by our trained distributors and expert support engineers.

Uptime - The system is modular and has back-up built-in to ensure that you have no downtime while you wait for support

No extra cost - We don't charge you extra for service and support.

Our commitment - Our service and support is simply the highest standard, every time - just ask our customers.

IMT Matcher are independent specialists in electronic witnessing and traceability. Our expert team are continually developing the Matcher system to meet and exceed our customers' individual needs around the world

What is Matcher?

Matcher is a barcode-based electronic witnessing, labelling, workflow scheduling, traceability and insights system.

It has been specifically created for fertility centres and donor banks to help prevent errors through misidentification of patients and their gametes and embryos by replacing human double-checking, reducing the risks of error and saving valuable staff time.

Matcher provides complete electronic traceability, recording,

'who, what, where and when'

at every step, from initial registration through to PGT, cryo preservation or transfer.

Fertility centres using Matcher work with confidence knowing that they have protected their staff and patients from the risk of mistakes, that the technology is safe and they have a quality management system that streamlines their working practices, saving time and money.



Why do mistakes happen?

Matcher

"Despite using verbal checks to ensure patient safety, healthcare staff do make mistakes. One explanation for this is that humans are inclined to respond automatically to questioning without matching their actions to their words- known as 'involuntary automaticity'.

Introducing automated systems such as barcoding is suggested as an effective way of reducing mistakes caused by human error."

Ref: Involuntary automaticity: a work-system induced risk to safe health care. Health Serv Manage Res. 2005 Nov;18(4):211-6.

Unlike other systems, Matcher records photographic evidence of all procedures as well as providing centres with unbroken chain of custody evidence

Why do I need Matcher?

To protect patients and staff from the risks of errors in IVF and continually streamline fertility centre processes

Helps prevent errors in fertility centres

How?

Error alerts

Alerts to potential mistakes before an incorrect transfer of material occurs anywhere, including freezing, thawing and PGT

Electronic recording

Automatic recording of logins and patient identifiers as well as eliminating the risks associated with paper records, manual entry and spreadsheets

Advanced witnessing with UniTrack

UniTrack labels, identifies, selects and matches same-numbered embryos and biopsies for a procedure as well recording and validating the intended fate e.g. disposal or movement to cryo stores

Matcher Cryo Chain™

This ensures a secure, compliant, and fully traceable digital chain of custody for cryo preserved materials – from the moment they leave the fertility centre, through transit, and into off-site storage and back*

Safeguards with proof at every step

How?

Photographic proof

Stored photographic history of every witness step gives visual evidence of patient and unique item label details on all labware and complete cycle photographic history

Chain of custody evidence

Complete evidence trail of 'who, what, where and when' at every witnessing step

Product traceability

Automatically tracks the number of every product lot used in each patient step

Reduces staff time and work-load

How?

No second person required

Staff can autonomously witness each procedure in seconds, with reduced disruption, distraction and overtime hours

Automates compliance

Reduces the burden of compliance for many legal, regulatory and quality management requirements

EMR integration

Integrates with EMR systems via open API, automatically importing / exporting patient information, eliminating time and risk of data entry duplication

Provides insights for continual improvement

How?

Real-time view

Live overview of workflow scheduling gives instant 'traffic light' view of daily cycle tasks and patient cycle status

Data Insights

Interactive data visualisation dashboards give instant insights and identify inefficiencies and outliers

Total quality management

Easily accessible data to assess key areas for improvement and standardisation as part of TQMS

Inspiring confidence, peace of mind and well-being for management, staff and patients

^{*} may require integration work

More than just witnessing

The Matcher system comprises a central database and 8 key functions

Workflow scheduling

Real-time overview of workflow scheduling gives instant 'traffic light' view of daily cycle tasks and patient cycle status.

Electronic witnessing

Matches barcodes on all labware down to embryo level, complete with photographic evidence including UniTrack advanced witnessing, covering the complete PGT process.

Labelling

Labels for everything, including straws, PCR tubes and culture dishes, incorporating human-readable information and unique barcode identifiers to individual embryo, well or microdroplet level.

ID security

Biometric fingerprint ID checks and electronic ID pass for patients and staff provides ID security and helps to prevent mistakes.



Process mapping

Fully configurable process mapping forcing function, including flexibility for choices and a full audit trail for any deviation or override.

Lot tracking

Fully automated traceability of all product lots coming in contact with gametes, embryos and patients.

Insights and Reporting

Instant, visual, interactive dashboards and reporting of all Matcher data for auditing, compliance, root cause analysis, identifying inefficiencies and continual improvement.

Cryo management

Ability to label and witness even the smallest straws and PCR tubes, as well as management, reporting and auditing of cryo stores and vessel space.

EMR Integration

Integrates with EMR systems via open API, automatically importing/exporting patient information reducing the risk of data entry duplication.

Matcher Cryo Chain™

Functionality that allows integration with off-site storage providers ensuring a secure, compliant and fully traceable digital chain of custody for cryo preserved materials.



Matcher is a software system which uses Pocket Matcher android Wi-Fi devices, either in handheld or hands-free mode. Many centres use a Pocket Matcher only solution. Matcher can also run on tablet PCs with Benchtop Matcher devices. Both types of device are used together with label sheet printers and bespoke labels.

Matcher devices scan and photograph the barcoded labels, without the use of lasers, radio frequency radiation, supplementary heating or any equipment modifications.



Pocket Matcher

Pocket Matcher readers can be portable in handheld mode or used in a fixed position in hands-free mode. They are connected to the wifi with a simple, easy to use interface



Benchtop Matcher

Benchtop Matcher readers are fast, scanning proactively as you work, and ideal where space is limited

What do they capture?







Time & date stamped photographic record of user, patient, item, reader and location

Barcode includes centre ID, patient ID and unique item number

Matcher integrates with all EMR systems (e.g. Artisan, IDEAS, MedITEX, MediFirst, BabySentry, Genie, HiX, nAble, JFIV, VRepro) and custom systems hosted on databases such as Oracle, SQL Server, MySQL, Filemaker etc. Matcher has a web-based API for easy 3rd party integration.

The hardware can be supplied with the system, at no capital cost, and the install is quick and easy with our dedicated expert technical support team, on-hand 24/7.

Tablet PC



Label sheet printer



Label sheets



Matcher in your language

Matcher is fully translated into more than 10 languages already and is able to be translated into any other, so it makes it easy for our customers to use Matcher in their own language.

Unlike other systems, Matcher is simple to install with no equipment modifications required – the Pocket Matcher is portable anywhere within the centre or simply placed in the work area.

Where does Matcher fit in my centre?

ID security



Lot tracking



EMR Integration

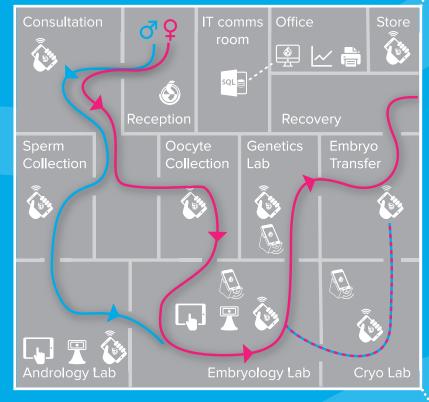




Witnessing with a Pocket Matcher handheld mode



Witnessing with a Pocket Matcher hands-free mode





Insights & Reporting



Witnessing and labelling to embryo level for PGT and transfer



Real-time workflow scheduling overview



Cryo management

Off-site storage



Matcher Cryo Chain[™] integration with off-site storage providers



Pocket Matcher handheld device



hands-free mode



Matcher software on centre's PCs



Matcher database



Matcher data Insights and administration



Benchtop Matcher





Matcher tablet PC



Admin Hub PC hosting Matcher database and API

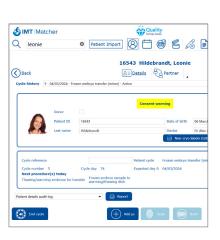
ID security

At registration, each patient can be given an electronic pass which provides reassurance that a secure system is in place to help prevent mistakes in their treatment.

- Quick and simple to produce
- Available to send to patients electronically
- Content and branding is customisable



Provides a visual check against patient database



Electronic pass is used for witnessing in the centre



Integrates with EMR systems for automatic patient import



Matcher makes labelling dishes extremely easy. Previously we were handwriting on dishes and some people's handwriting makes it very hard to read, which is concerning when you're checking the identity.

Simone Koch, Laboratory Director Kinderwunschzentrum Ludwigsburg, Germany

Labelling



Matcher includes two types of labels, one for non-cryo and one for cryo/PGT, all of which are fully validated. Each label sheet provides enough labels for every type of labware required, covering the whole treatment cycle from initial registration through to PGT, cryo storage and transfer.

Example of cryo label information



Fits-all-sizes

Matcher labels fit all shapes and sizes of labware, even time lapse dishes, vitrification straws, ICSI dishes, biopsy dishes and PCR tubes

Single label

The barcodes and human readable text containing identifying details are printed on the same label, so they cannot be separated

Tested

All aspects of the labels are tested - label materials, adhesive, and printer toner. Testing includes mouse embryo assay, sperm survival assay and over 15 years of human gamete and embryo usage. In addition Matcher's cryo labels are tested for safe, long term liquid nitrogen storage

Electronic witnessing

66 Matcher provides live visual and audible match results that allow staff to carry out the time sensitive procedures with reassurance. 99

Ingrida Krasauskaite, Clinical Embryologist, MSc Birmingham Women's Fertility Centre, UK



Matcher alerts users if a dish, tube, vial or straw with the incorrect identity is used, before a transfer of material takes place

Mitigates human error

Unlike a human, Matcher cannot confuse patients with similar names or IDs

Photographic evidence

Matcher takes time and date stamped photographs of every witness step providing a full photographic history

Track all staff present during a procedure

Matcher can record all persons present during a procedure such as at critical points when staff are in contact with a patient

No 'points of entry'

Matcher witnesses every procedure, from patient registration through to cryo preservation/transfer with no human witness needed





Individual item barcodes

Matcher's barcodes are globally unique for each embryo and automatically identify the embryo number when scanned

Witnessing non-Matcher barcodes for a patient

Matcher now allows users to scan non-Matcher barcodes. Items that already have a barcode label can be scanned as part of a witness step, such as vitrification devices already in storage, pre-barcoded PCR tubes, blood tubes or Timelapse dishes

Enhanced chain of custody

Labware tracker enables users to track the barcoded labels of a specific dish, tube, cryo device or Patient ID through a process, ensuring specific items of labware scanned in preceding procedures must be presented again in the right place in the chain of custody

Increasing staff efficiency

Matcher reduces the need to disrupt and distract staff from their work. It eliminates time spent waiting for a human witness and work can continue when staff numbers are limited e.g. weekends / holidays

Full centre coverage

Pocket Matchers can be used in hands-free mode for fixed position witnessing or can be switched to portable handheld mode and used anywhere in the centre. Benchtop Matcher devices can also be used in laminar flow cabinets

Unlike other systems, there is no need for additional human verification because Matcher both reads and verifies patient identity before each transfer step

Advanced witnessing solution for PGT

Matcher UniTrack[™] is an end-to-end solution to help reduce the risks of error in the PGT process.

UniTrack is advanced witnessing functionality which enables centres to label, identify, select and match the same-numbered embryos and biopsies in a procedure, together with an option to select the fate of those specimens, and then verify that fate was actioned.

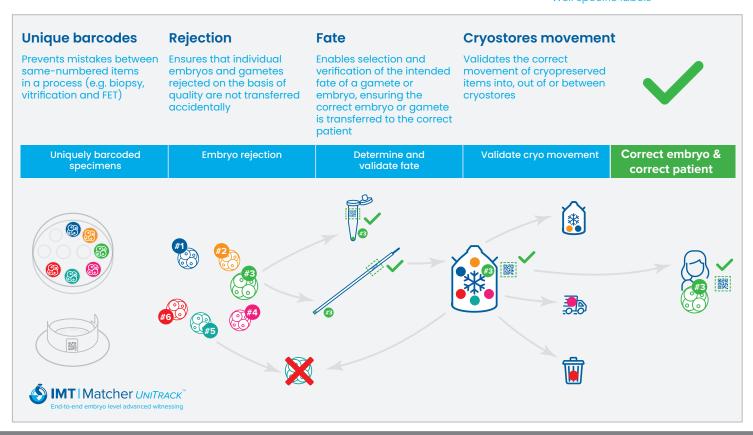
- Unique barcode labelling of individual wells in multi-well dishes (GPS or microdroplet) using a PGT specific label
- Unique barcode labelling of corresponding biopsy samples
- Chain of custody through the whole PGT process culture, biopsy, tubing, vitrification, cryo storage, warming and transfer
- Fast, electronic, photographic records of the whole process
- New Active Well Selector accessory to identify the selected embryo/well







Well specific labels

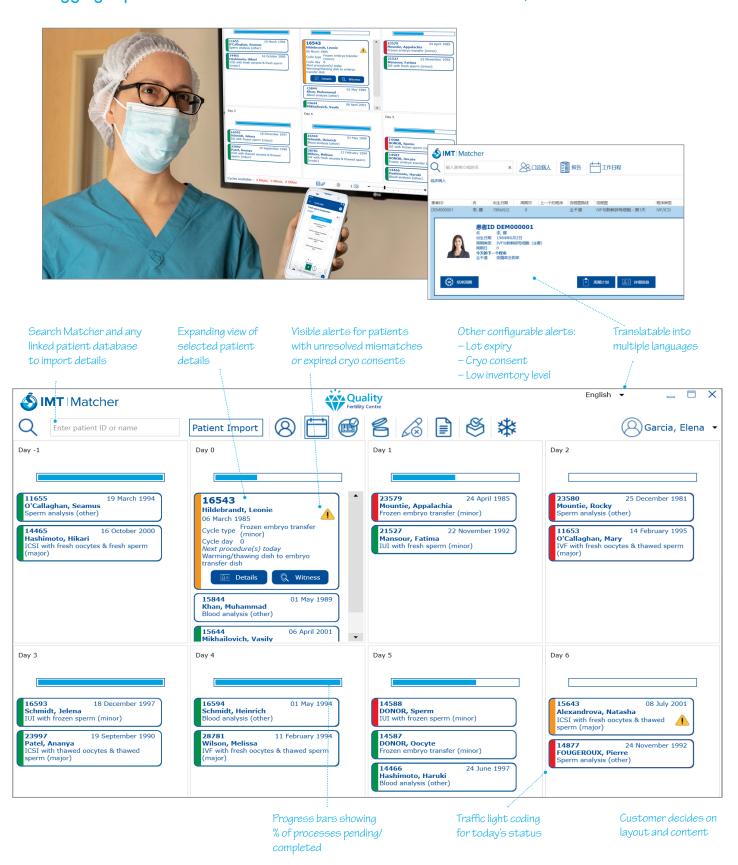


Matcher is the only witnessing system with an end-to-end photographic witnessing solution for PGT with unique barcode identifiers down to individual embryo, well or microdroplet level

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Workflow scheduling

The workflow scheduler gives a real-time overview of patient workflow showing a visual 'traffic light' view of tasks remaining for today, next procedure due, as well as flagging expired consents and unresolved mismatches for review, to the whole team.



Process mapping

During set up and installation, the Matcher team work closely with you to assist in configuring Matcher process maps to your Standard Operating Procedures.

Forcing function

Matcher's process mapping function reflects your process flows, including all decision points and choices prompting the user with the next expected step. This helps ensure that witness steps are carried out in the correct order and are not missed out

Configured to each centre

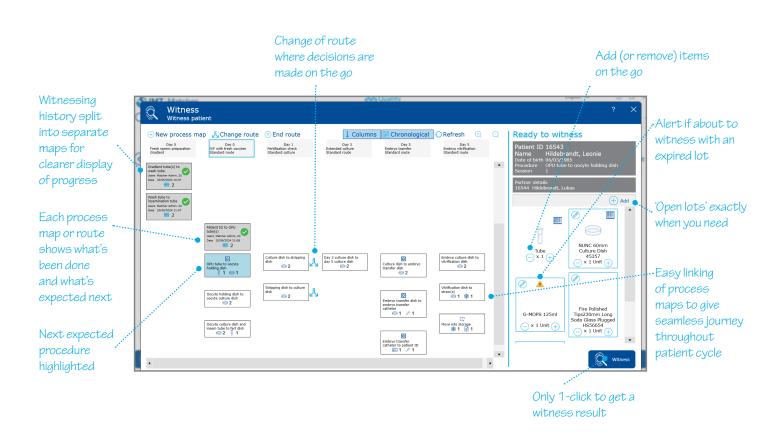
The process steps are easily configurable to each centre's existing Standard Operating Procedures using drag and drop templates

Flexible

Process maps include all the choices and alternative paths faced during any treatment cycle, e.g. when an IVF converts to an ICSI process or when deciding if some or all embryos require PGT or cryopreservation

Non-restrictive

Witness steps can be selected out of sequence, e.g. if a step needs to be repeated or skipped, however any deviation will be annotated and recorded and is fully auditable



Unlike other systems, every process step, including cryo, can be labelled and witnessed at no extra cost, as all labels required for a full cycle of treatment are provided within the cycle price

Cryo management

Matcher provides an end-to-end solution for witnessing every step including movements into and out of cryo stores, as well as management of the cryo stores.

Labels

 Cryo labels have been tested for long term LN2 storage and printed information cannot rub or scratch off

LN₂ readable

 The labels can be read by the Matcher devices even through nitrogen vapour on small vitrification straws

Configurable label text

 The content of the printed information on each cryo label can be individualised, e.g. to identify freeze date, item number within a batch and number of embryos or oocytes within the straw

Space allocation

 Available space is displayed and items can be selected and allocated to locations within cryo vessels, using an electronic view of your cryo stores

Tracked movements

 Movements of items into and out of vessels can be tracked and items easily located through the Matcher system

Witnessing non-Matcher barcodes

 Vitrification devices already in storage with a non-Matcher barcode can be scanned as part of a witness step

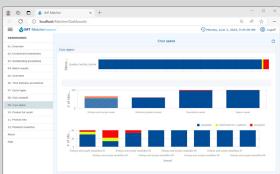
Flexible reporting and auditing tools

 All data captured can be reported in real time, including reports of any changes to cryo records, location and movements for each item, contents of each vessel and all material stored for a particular patient

Link to multiple parties

 Matcher can link cryo preserved material to multiple parties within the database and can also include storage consent for all of them







Matcher Cryo Chain™ functionality allows integration with off-site cryo storage providers. This ensures a secure, compliant and fully traceable digital chain of custody for cryopreserved materials – from the moment they leave the fertility centre, through transit, and into off-site storage and back. This feature may require integration work with your specific cryo storage provider.

We are currently working in partnership with



Unlike other systems Matcher uses barcodes which are automatically pre-assigned to each patient and printed onto label sheets, with sizes for every type of labware, even small complex items

Lot tracking

Matcher gives you a complete paperless audit trail of all labware, media, consumables and other associated products or equipment that come into contact with gametes or embryos.

Easy product scanning

- Configured for your own lists of products
- Scans and reads the manufacturer's product barcode

Scan into and out of stock

- Lots can be scanned into and out of stock using either type of device
- Stock tracking function shows minimum stock and alerts users at re-order levels for each product

GS1 barcode compatible

- Scans and reads GS1 barcodes
- Automatically populates product/lot information of e.g. expiry date and lot number from barcode scan

Tracking usage automatically

- Matcher automatically tracks the number of every lot in each procedure whilst witnessing
- Add or remove products to and from the procedure as you witness

Record receipt, open, start and finish times

 Matcher devices photograph and read the barcode labels when each lot is received, opened, started or finished

Expiry alerts

- Alerts, before and after lots expire
- Real-time warning if expired lot is about to be used in a witness step

Reports and auditing

 All data auditable in real-time e.g. dashboard showing every patient who came into contact with a specified lot

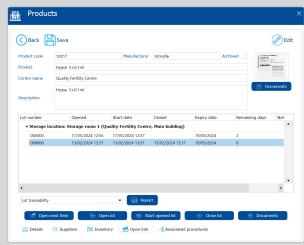
Time saving

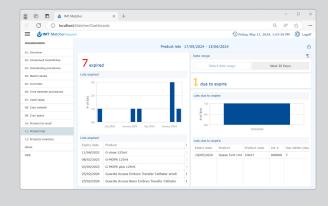
Saves time in capturing, reporting and auditing lot information

Compliance

 Enables easy compliance with your competent authority traceability requirements e.g. EU Tissues and Cells Directive







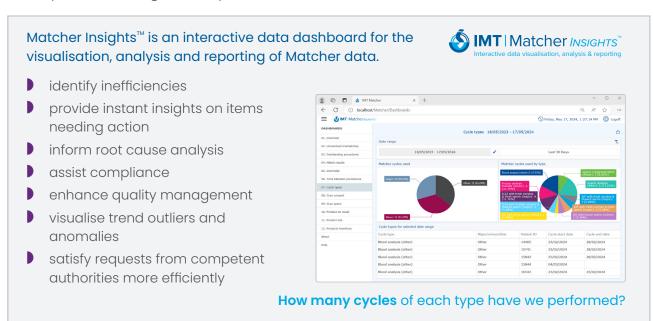
Unlike other systems, Matcher offers a choice of devices giving users the flexibility to use handheld Pocket Matcher devices to photograph and read every product lot barcode

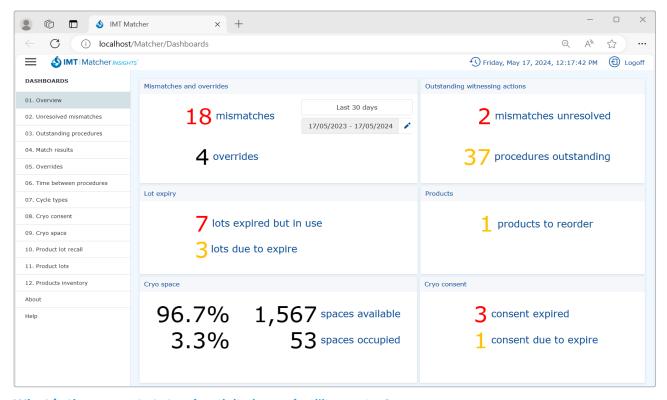
Insights & Reporting

As a patient moves through the cycle of treatment, Matcher records the 'who, what, where and when' of each witnessing step as well as the product lots coming into contact with patients, gametes and embryos.

All information is recorded in the database and can be retrieved very quickly and easily at the click of a button using the Insights and reporting functionality. This can be used for both internal and external auditing as well as supplying complete photographic reports to patients.

Lab managers can receive automatic email notifications to be kept aware of any mismatch events that have occurred in the laboratory; if a cycle is ended with incomplete process maps; or if the system is running low on cycles.

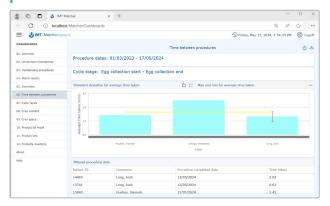




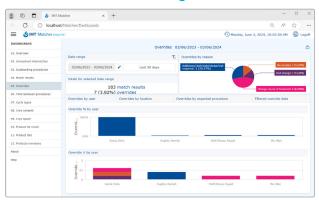
What is the current state of activity in my fertility centre?

Interactive data dashboards

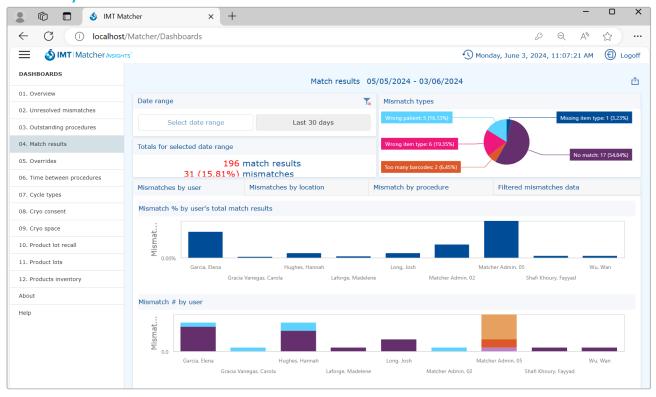
Is **practitioner A** performing tasks faster than **practitioner B?**



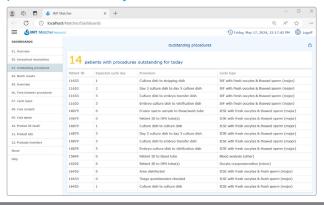
How often are we deviating from our SOP?



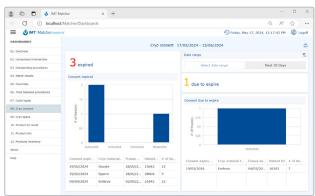
How many errors have we made? Where did we make the errors? Who made the errors?



Have we **finished all the tasks** that were planned for today?



Are we **storing material with lapsed consent** and do we need to renew consent?



Unlike other systems, Matcher's interactive data dashboards can assist centres to identify anomalies and outliers helping to improve efficiencies within a centre and across fertility groups

Is this the correct tube, dish or straw?



Matcher **TELLS** the human





RFID ASKS the human







Humans can make **MISTAKES**



This is why Matcher is different from other witnessing systems

Matcher



RFID

No human witness required

The Matcher system can completely replace human verification at every step. The patient's ID and barcodes are assigned automatically at registration, there is no gap in the electronic chain of custody, and no need for any human witnessing throughout the entire cycle of treatment, cryopreservation and thawing.



With **RFID** systems It may be possible to manually assign some tags to the patient at the start of the cycle, but many can only be assigned mid cycle. So not only does the technology add more time and cost but it also still requires a second manual witness.

Barcode labelling

Pre-assigned barcodes - Matcher barcodes are automatically pre-assigned to each patient reducing the risk of error

Single label for all IDs - The electronic barcode ID and human readable ID text are printed on the same label, so there's no added risk from having separate label and electronic ID

Labels for everything - The labels can be put on every type of labware, even small or complex items e.g. PCR tubes, straws and time lapse dishes

Uses existing barcodes – Matcher uses existing manufacturer product barcodes for lot traceability

No extra cost for additional witness steps
- Matcher's label sheets provide enough
barcodes to witness every step, including cryo,

with no extra cost for additional steps



Each **RFID** tag needs to be assigned to a patient, and matched to the correct separate label which requires double human verification each time.

Each **RFID** tag requires an additional separate printed text label, which introduces added risk. Some RFID systems have barcode labels for cryo items, but users must assign the identity from an RFID tag to each barcode and switch between systems, which introduces further risks and complexity.

RFID tags do not fit on every type of labware, e.g. PCR tubes or vitrification devices as the tags are quite big, and bending can damage them and lose their ID. Also their thickness means some dishes cannot sit flush on the heated surface with a tag underneath.

RFID tags are not used for tracking products. RFID systems use a separate barcode module for this, and the product lot numbers and expiry dates are not automatically linked to the patient and the procedure.

With **RFID**, every tag costs money which can encourage centres not to witness every step.

Matcher



RFID

Photographic proof

Matcher's imaging scanners provide time stamped photographic proof of each item used at each witness step, as part of its evidence of 'who, what, where and when' for every witnessed procedure. It can even capture photographic proof of any non barcoded item labels (e.g. when thawing old cryo preserved straws).



RFID systems do not provide photographic proof.

Embryo level ID

Matcher's barcodes are globally unique for each embryo and can therefore automatically identify the embryo number when scanned. This means it is not only matching the correct patient but also the correct embryo culture well/microdroplet to the correct vitrification dish, vitrification device, biopsy dish and PCR tube.



RFID tags are not used on individual wells/microdroplets, biopsy tubes or vitrification devices. RFID systems cannot witness that the correct embryo is selected from the correct well/microdroplet in the culture dish. They therefore leave many missing links in the chain of custody.

Comprehensive coverage

Matcher barcodes can be put on every item of labware including biopsy tubes and vitrification devices, and as Matcher provides enough barcode labels to witness every step at no extra cost, there is no need for any gaps in the chain of custody.



RFID tags cannot be put on all items such as biopsy tubes or vitrification devices, which can leave gaps in the chain of custody, and as every tag costs money, clinics may be financially discouraged from witnessing every step with multiple tagged items.

Data Insights

Matcher provides instant, interactive data insights and helps identify anomalies and outliers, helping to improve efficiencies and assist with compliance and auditing within a centre and across groups.



The data captured is limited and nowhere near as comprehensive, which means the reporting functionality is also limited. Data cannot be cross referenced as easily because it is not always linked to the procedure.

Simple installation

Matcher is simple to install with no equipment modifications required. The portable Pocket Matcher devices give users flexibility for witnessing different types of procedures in any areas of the fertility centre including isolettes, and the benchtop devices can simply be placed by the microscope or on any heated surface.



RFID systems require modifications to existing laminar flow hoods, heated surfaces or the installation of additional equipment and are neither portable nor practical for small spaces such as isolettes. Raised RFID heated surfaces do not cover the whole work surface and so create a risk of spillage.

Witnessing specialists

IMT Matcher are specialists in electronic witnessing and traceability. It's all we do, so we're also completely independent. Our expert team are continually developing the Matcher system to meet and exceed our customers' individual needs around the world and to guide industry best practice for the long term.



Organisations selling and needing to support multiple product lines have conflicting areas of focus and priority. Staff can also be spread across more than one product line. Newcomers to the market with simplistic answers to the complex realities of fertility work leave many risks unaddressed, often without even realising.



In partnership with



IMT Matcher™ is a product from Matcher Technologies Ltd. – developing and providing innovative IVF management technologies and quality management systems to the ART industry worldwide. Matcher Technologies Ltd and Reprotech LLC have formed a strategic partnership built on shared values of innovation, quality, and exceptional service. Our complementary technologies create a seamless, end-to-end digital chain of custody for IVF centres, from on-site witnessing and cryo management to off-site cryo storage at purpose-built biorepositories. Together, we aim to eliminate pain-points, reduce risk and deliver a seamless and streamlined experience.



"The data that Matcher provides will help us pinpoint process bottlenecks, standardize best practices, and estimate staffing and scheduling needs based on each lab's real-time demand for services and unique mix of cycles and procedures"

Matthew "Tex" VerMilyea, Vice President of Scientific Advancement Ovation Fertility, USA Group | 12 sites | >12,000 cycles | USA





"The clinic staff are happier and more assured conducting embryo transfers and different procedures having the security net of Matcher"

Enrico Vaccari, Ph.D.
ESHRE Senior Clinical Embryologist, Wunschbaby Institut Feichtinger,
Vienna, Austria
Group | 3 sites | >500 cycles | Austria





"The photographs of every witness step is one of the key features of Matcher that we couldn't do without"

Kimberly Kienast
Head of IVF and Andrology Laboratory, MVZ Fertility Center Hamburg
Hamburg, Germany
Private | 1 site | >1,000 cycles | Germany





"We use Matcher extensively as a lab tool for stock receipt and management as well as traceability - giving us alerts when a product is about to expire and reporting out the patients who come into contact with certain products."

Anita Chau MSc Lab Manager The Agora Clinic, UK Private | 2 sites | >800 cycles | UK





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