Matcher is a truly independent witnessing system, providing auditable photographic traceability of all samples and product lots at every step throughout the treatment process. From registration through to PGT/PGD, cryo stores or transfer, Matcher helps to reduce the risks of error throughout the entire clinic, using safe and easy to install technology.
Matcher’s photo evidence is a huge advantage. We can pull up the photos and prove that the correct work was performed every time.

Alison Campbell
Director of Embryology, CARE Fertility Group, UK & Ireland

Electronic witnessing should be an essential component of the safety systems incorporated into every IVF process, and Matcher has been a significant and important technology for the CARE teams.

Simon Fishel
Founder & Managing Director, CARE Fertility Group, UK & Ireland

Matcher complements our standard approach to total quality management across the IVI network.

Dr. Nicolás Prados, PhD
Director, IVF Laboratory, IVI Sevilla

Because there is no capital cost and the fees are per cycle, we have been able to demonstrate significant cost savings from day one.

Gerry Celia, PhD, HCLD
Lab Director, Dominion Fertility, Arlington, USA

Matcher was quick and easy to install, and totally customisable.

Laura Dracea, General Manager, Clinica Medicala Gynera, Bucharest, Romania
Matcher is a barcode-based electronic witnessing, labelling, workflow scheduling and traceability system, specifically created for IVF clinics and donor banks to help prevent errors through misidentification of patients and their gametes and embryos. It is the only electronic witnessing system that is better than human double-checking, reducing the risks of error and saving valuable staff time.

Matcher provides complete electronic traceability, recording the ‘who, what, where and when’ at every step, from initial registration through to cryopreservation or transfer, and includes photographs of all procedures, unbroken chain of custody evidence and comprehensive reporting for clinics.

With a new visual patient workflow scheduler, Matcher’s quality management system operates seamlessly throughout the clinic, delivering major benefits to laboratory staff, doctors, nurses and patients.

- Error prevention
- Replaces all human double-checking
- Automatic traceability
- Real-time workflow overview
- Compliance
- Time saving
- Unbroken chain of custody
- Photographic proof
- Safe technology
- No capital cost
- Flexible reader positioning
- Simple installation

Why do mistakes happen?
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.

Development of the Matcher system began in 2005 in response to high profile mistakes made within the UK IVF industry which resulted in over 100 recommendations being made by the UK Competent Authority (HFEA). As a result, the Matcher system has been developed in close conjunction with clinics to address many of these issues and more, including compliance with many requirements of the EU Tissues and Cells Directive.

Clinics using the Matcher system work with confidence knowing that they have protected their staff and patients from the risk of mistakes, that the technology is safe and that they have a system that helps streamline their working practices, saving time and money.

**Error prevention**
- Helps minimise risks of human error, including misidentification, alerting to mistakes before an incorrect transfer of material takes place

**Replaces all human double-checking**
- No second human confirmation required, allowing staff to work autonomously with reduced disruption and distraction

**Automatic traceability**
- Matches, confirms and photographs the identity of the patient and unique item identifier on all labware in every procedure

**Real-time workflow overview**
- Real-time overview of workflow scheduling gives instant ‘traffic light’ view of daily cycle tasks and patient cycle status

**Compliance**
- **Legal/regulatory** - assists clinics to comply with competent authority requirements
- **Validation** - validation support and risk assessment included
- **Quality management** - fits in closely with clinics’ ISO accreditations

**Time saving**
- Saves staff hours spent on witnessing, traceability and compliance as well as reducing overtime hours and holiday/maternity cover

**Unbroken chain of custody**
- Witnessing takes place at every step of a cycle of treatment, from registration to cryo stores, with no additional human verification required

**Photographic proof**
- Every procedure is photographed, providing visual evidence of patient label details and complete cycle photographic history

**Safe technology**
- Matcher uses digital photo images to read the barcoded labels, without the use of lasers, radio frequency radiation or supplementary heating (no FDA approval required in USA)

**No capital cost**
- Fees are ‘per cycle’ only with no up-front costs and no hidden costs. Fees include equipment, installation, training, service, support, upgrades and consumables

**Flexible postioning**
- The new Matcher5 reader has a very small footprint – ideal for small cabinets and isolettes – and can be positioned in any location, including under the microscope

**Simple installation**
- Quick and easy to install - one week typical installation, including all testing and training with no equipment modifications required
More than just witnessing

The Matcher system comprises a central database and 8 key components:

- **Labelling**
  Labels for everything, incorporating unique barcode identifiers to individual embryo level and human-readable information.

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

- **Electronic witnessing**
  Error prevention system matches barcodes on all labware down to embryo level, complete with photographic evidence recording the ‘who, what, where and when’ for every procedure.

- **Photo ID card security**
  ID card for every patient and partner, giving tangible security, helping to prevent mistakes and providing peace of mind for patients.

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

- **Reporting**
  Simple, instant reporting of all data captured for auditing and compliance, including complete photographic history of the patient’s cycle.

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

- **Lot tracking**
  Fully automated traceability of all labware, media and consumables coming in contact with gametes, embryos and patients.
The Matcher technology

The Matcher system is a software system which runs on tablet PCs and uses new mini Benchtop Matcher readers and Pocket Matcher handheld devices, together with ID card and label printers and our bespoke labels.

Unlike other systems, Matcher uses digital photo images to read the barcoded labels, without the use of lasers, radio frequency radiation, supplementary heating or any equipment modifications.

Matcher integrates with all patient management databases (e.g. IDEAS, MedITEX, MediFirst, eIVF, BabySentry, Genie, HiX) and is highly configurable to each clinic’s existing Standard Operating Procedures.

The hardware is supplied with the system, at no additional cost, and the install is quick and easy with our dedicated expert installation team.

In addition, the Matcher technical support team are on-hand 24/7 for answers to any questions.

Type and quantity of equipment provided is flexible and configurable to your clinic’s requirements.
Where does Matcher fit in my clinic?

- **Photo ID card security**
- **Lot tracking**

**Witnessing with a Pocket Matcher**

**Real-time workflow overview**

**Reporting**

**Labelling and witnessing to individual embryo level**

**Integrated labelling system**

**Witnessing with a mini Benchtop Matcher**

**Cryo management**

Pocket Matcher handheld device

Matcher database

Mini Benchtop Matcher unit

Matcher software on clinic’s PCs

Matcher reports and administration
During the registration process, each patient can be given a high quality, clinic branded photo ID card which provides tangible reassurance for patients, with added confidence that a secure system is in place to help prevent mistakes in their treatment.

**Quick and simple to produce**
- Printable at reception when patients register

**No extra cost**
- ID cards and ID card printers can be provided as part of the system

**Easily replaced**
- If a patient forgets to bring their ID card, or loses it, a replacement can easily be produced

**Configurable content**
- Only print the fields you want on the ID card
- Add your clinic’s own logo and emergency contact details

**Unbroken chain**
- Confirming the correct identity of a patient’s ID card is the only ‘point of entry’ in the Matcher system

"We can now give our patients full traceability for every process step with Matcher’s innovative electronic monitoring system."

Alexia Chatziparasidou
Director & Clinical Embryologist, Embryolab, Greece
Labelling

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

There’s no need to handwrite on any labware again - even PCR tubes - saving time and reducing the possibility of mis-reading the information.

Fits-all-sizes
Matcher labels fit all shapes and sizes of labware, even very small vitrification straws, ICSI dishes and PCR tubes

Clear vision
Matcher’s clear vision labels can fold underneath dishes, and be clearly read from above without obscuring microscopy

Cryo proof
Matcher’s proprietary labelling system includes both standard and cryo labels. Cryo labels are tested for safe, long term liquid nitrogen storage

Configurable content
There are multiple label reports to choose from

Tested
All aspects of the labels are tested - label materials, adhesive, and printer toner. Testing includes mouse embryo assay, sperm assay and over 10 years of human gamete and embryo usage

No additional cost
Printers for the labels can be provided as part of the system, as well as sheets of each type of labels

Unique barcodes
Every barcode on every item is uniquely identifiable for unrivalled traceability down to embryo level – a major advantage for embryo biopsy

Example of PGT tube information

Example of cryo label information

As well as being an inclusive module of the full Matcher system, clinics can purchase a licence for the labelling only module of the system and just pay a small fee for each sheet of labels.
The Matcher5 software has been developed on a new software platform (WPF) which enables a host of additional functionality to make your work simpler, easier and faster. This includes a fully translatable, streamlined new user interface with drag and drop capability.

The key new component of the software is the workflow scheduler which gives a real-time overview of patient workflow scheduling, a visual ‘traffic light’ view of daily cycle tasks and patient cycle status.

Other configurable alerts:
- Lot expiry alerts
- Consent expiry alerts

Progress bars showing % of tasks pending/completed
One click drill down into specific day

‘Traffic light’ coding for task status

Clinic decides on layout and content

Expanding view of patient details
Matcher electronic witnessing is designed to help prevent errors in IVF by replacing and improving upon all human double-checking, protecting patients and clinics from the risks of misidentification and human error.

**Double check**
Matcher alerts users if a dish, tube, vial or straw with the incorrect identity is used, before a transfer of material takes place. It confirms when the correct identity is used, providing confidence to the user to proceed.

**Mitigates human error**
Unlike a human, Matcher cannot confuse patients with similar names, and using Matcher reduces risks of human involuntary automaticity.

**No ‘points of entry’**
Matcher seamlessly witnesses every procedure, from patient registration through to cryo preservation/transfer with no human witness needed.

**Witnessing, not just recording**
Matcher both reads and verifies patient identity before each transfer step. By contrast, some other witnessing systems require some human verification, therefore retaining risks of human error.

**Individual item barcodes**
Matcher also has the ability to track items individually as each item has its own individual, unique barcode. This then links back to the patient which enables witnessing and tracking of individual embryo biopsies and individual cryo-preserved items.

**Increasing staff efficiency**
The Matcher system reduces the need to disrupt and distract staff from their work. It eliminates time spent waiting for a human witness and means that work can still take place when staff numbers are limited, such as weekends and holidays.

**Full clinic coverage**
A mini Benchtop Matcher camera unit is usually located inside each laminar flow cabinet where transfers take place. A portable Pocket Matcher handheld device is used in other areas of the clinic where witnessing or identifying checks occur, and can be used in the laminar flows cabinet, if preferred.

“Matcher replaces the need for human double verification, while ensuring that the appropriate checks take place at each step.”

Gerry Celia, PhD, HCLD
Lab Director, Dominion Fertility, Arlington, USA
Matcher uses two types of barcode readers – the mini Bench Matcher and the portable Pocket Matcher handheld reader. Both devices are totally safe, capturing digital photo images of every step without the use of lasers, radio frequency radiation, supplementary heating or any equipment modifications.

The mini Benchtop Matcher reader

**Fast**
Minimal time spent witnessing

**Super sensitive**
Auto focus readers react to barcodes proactively as you work

**Small**
Ideal when space is limited such as small cabinets and isolettes

**Flexible**
Choose from a variety of mounting positions for efficient witnessing in any location, including under the microscope

The Pocket Matcher reader

**Portable**
Handheld Pocket Matchers connect to your clinic’s existing wifi and can be used both inside and outside the labs

**Ergonomic**
Easy to operate with just one hand

**LN₂ proven**
Scan straws and vials through nitrogen vapour whilst keeping samples safe under LN₂

**Data security**
Password secured devices store no customers data – just act as a window to the clinic’s database

What do they capture?

**Unique barcode**
Each barcode codes for the clinic database, patient ID and unique label or item number

**Photo**
Both devices capture time stamped photos of the barcode labware

**Data**
Each recorded scan includes the time, date, reader, location and user
During the set up and installation phase, the Matcher team work closely with you to assist you to configure Matcher to your clinic’s Standard Operating Procedures. The process maps within the system will then reflect your existing procedures.

**Forcing function**

Matcher’s process mapping function prescribes your clinic’s 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 clinic**

The process steps are easily configurable to each clinic’s existing Standard Operating Procedures using drag and drop templates.

**Flexible**

Process maps are configured and linked together to 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 PGS 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 from a prescribed process map will be recorded and is fully auditable. Users can also select from configurable drop down lists of reasons for the deviation, ensuring audit history is captured quickly and easily.

**Process mapping**

- Pre-populates patient cycle plan with clinic’s pre-configured process maps
- Easy adjustment to maps and routes on the go
Each process map or route shows what’s been done and what’s expected next.

Simple touchscreen icons to add dishes/tubes/straws.

Only 1-click to get a witness result.

Easy linking of process maps to give seamless journey.
The Matcher system gives you complete paperless traceability and audit trail of all labware, media, consumables and other associated products that come into contact with gametes or embryos throughout each cycle.

**Uses existing product barcodes**
- Configured for your clinic's lists of products

**Record receipt start/finish**
- Uses Pocket Matcher handheld devices to photograph and read the barcode labels when each lot of labware, media or consumables is received or opened

**Tracking usage automatically**
- Matcher tracks the use of every lot used in each procedure automatically, whilst witnessing each procedure performed

**Device flexibility**
- Lots can be recorded using either the mini Benchtop Matcher or the Pocket Matcher devices

**Reports and auditing**
- All data captured can be audited simply in real time through the configurable reporting function

**Compliance**
- Designed for compliance with competent authority traceability requirements e.g. EU Tissues and Cells Directive

**Time saving**
- Saves time in capturing, reporting and auditing lot information

**Expiry alerts**
- Configurable alerts, before lots expire
The Matcher system provides an end to end solution for witnessing every step of the patient journey throughout a cycle of treatment, including movements in and out of cryo stores, as well as management of the cryo stores.

Labels
Cryo labels have been tested for long term liquid nitrogen storage and are self-laminating, so printed information cannot rub or scratch off

LN$_2$ readable
The labels can be read by the Pocket Matcher handheld devices even through nitrogen vapour on small vitrification straws and in certain conditions can even read barcodes on vial labels or ampoules just under the surface of liquid nitrogen

Configurable label text
The content of the printed information on each cryo label can be individualised at the point just before the labels are printed, for example to identify the freeze date, the item number within a batch and the number of items within the container

Space allocation
Available space can be found and items can be selected and allocated to locations within cryo vessels, using an electronic recreation of a clinic’s cryo stores

Tracked movements
Movements of items in and out of vessels can be tracked and items easily located through the Matcher system

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
As a patient moves through the cycle of treatment, the Matcher system records the ‘who, what, where and when’ of each witnessing step. It also records the lots of products coming into contact with patients, gametes and embryos as part of that procedure. All of that information is recorded in the database and can be retrieved very quickly and easily at the click of a button using the reporting functionality of the system. This can be used for both internal and external auditing as well as supplying complete photographic reports to patients.

- Complete audit trail
- Paperless
- Produce any report in seconds
- Real-time data
- Comprehensive reporting suite

### Training, Service & Support

**Training**

As part of the implementation of the Matcher system, we provide full training for users and administrators of the system in accordance with a clinic-defined and agreed training schedule. We also supply training (combining remote and onsite) and user guides as well as help functionality within the software itself.

**Service & Support**

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

Clinic: Dominion Fertility, VA
Country: USA
Name: Gerry Celia, PhD, HCLD
Position: Laboratory Director
Matcher customer since: June 2013

Why did you want an electronic witnessing system?
With an ever-increasing patient load, and new employees to train, it is entirely too easy to become overwhelmed. We were looking for a system to help reduce the risks of mistakes in the clinic, all the while providing a permanent record that gave our patients the confidence they desired.

How did you decide on Matcher?
I was initially drawn to Matcher because it was risk free (no upfront cost to us), it solved numerous issues for us – uniform labelling, double identification, witnessing, batch tracking, cryo tracking, inventory – and the optical nature of the witnessing ensured a visual record for our patients.
What sealed the deal for us was the employees. These are people who are clearly working to provide the best possible product for us and our patients.

What were the main benefits of Matcher?
Matcher replaces the need for human double verification, while ensuring that the appropriate checks take place at each step. Matcher’s photo evidence is a huge advantage. We can pull up the photos and prove that the correct work was performed every time.

Have you seen savings?
As our clinic has grown we have truly come to appreciate the security and time savings offered by the Matcher system. Because there is no capital cost and the fees are per cycle, we have been able to demonstrate significant cost savings from day one.

How does Matcher fit with your IT systems?
Matcher links seamlessly with our existing database, saving us more time and further reducing the risk of mistakes.

How do you find the Service & Support?
What sets Matcher apart is their unrivalled customer service and responsiveness. They custom-designed the Matcher system around our work, and are always looking at ways to help us and enhance our experience.

What else impressed you?
Matcher was quick and easy to install, and totally customisable.

What do your patients think?
Matcher ensures that no mistakes are made, all while providing a permanent record that gives our patients the confidence they desire.

Overall comments
The Matcher system provides us with extra confidence throughout the day, and is a great way of capturing and permanently recording important information.
Matcher™ is a product from IMT International – developing and providing innovative IVF management technologies and quality management systems to the ART industry worldwide.