



华粤行医疗
HARIOMED

INTELLIGENT VERIFICATION AND ANALYSIS SYSTEM

To conduct multiple verifications between patients and their corresponding samples in the ART laboratory, the system is designed basing on multiple technologies such as Radio Frequency Identification(RFID), fingerprint recognition, data analysis and processing, to eliminate the possibility of any mismatch . Functionally, the system initiates by importing patient information and subsequently batch-encoding it onto tags. Through RFID sensor, information verification can be realized throughout the entire IVF practice from sample receipt to transplantation.

Benefits



Eliminate the mismatching concern during IVF process



Provide data support for the laboratory management

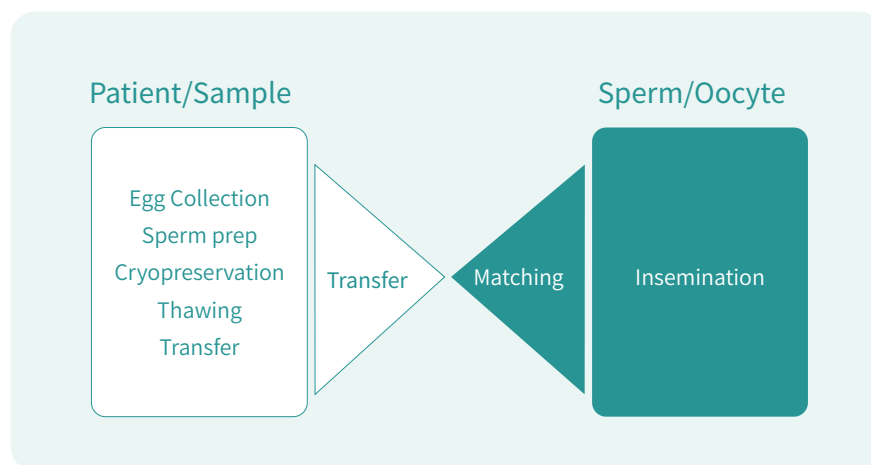


Do not affect work efficiency



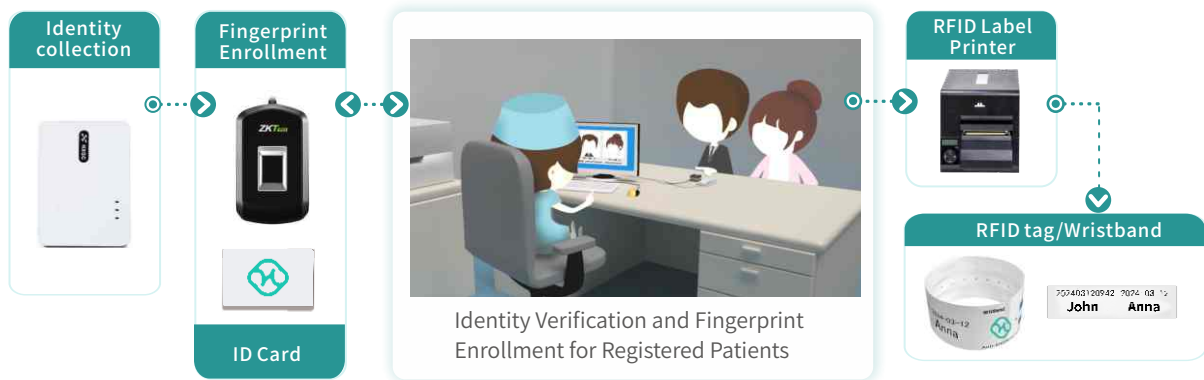
Enhance doctor-patient trust

Typical operation in workflow



Reception (Identity Verification)

- Verify the identity of registered patients by using fingerprint recognition, or ID card and record the patient's information onto RFID tags.



Semen Preparation Room

- Semen Collection Room:** The patients go for semen collection after the verification of identity information.
- Semen Transfer Window:** Ensure consistency between patients and their corresponding samples.
- Andrology Room:** Match the centrifuge tubes pre-equipped with RFID tags to the patients' semen cup, to avoid mismatch during the transfer process.



Egg Collection

- Before egg collection, a RFID tag has been generated based on the patient's identity information and shared with embryology lab which prepare culture dishes with RFID tags. During egg retrieval, a desktop verification reader verifies the patient identity information and dishes automatically, ensure they are not mixed-up.



Synchronize patient information with the working area, preparing culture dishes for automatic verification

Egg Collection working area

Egg Collection-Verification Interface

Insemination working area

- During insemination, the verification reader automatically conducts matching of oocyte and sperm.



Simultaneous Matching of Oocyte and sperm

Insemination working area

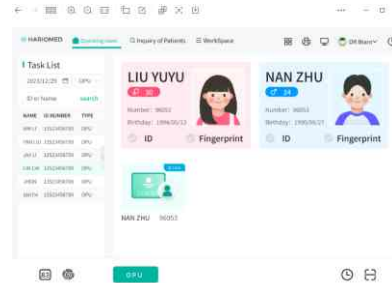
Marital Identity-Verification Interface

Transfer Working Area

- Operating Room: Verify patient's identity information.
- Transfer Working Area: Verify information to ensure consistency between samples and corresponding patients.



Scan the electronic wristband to confirm identity.



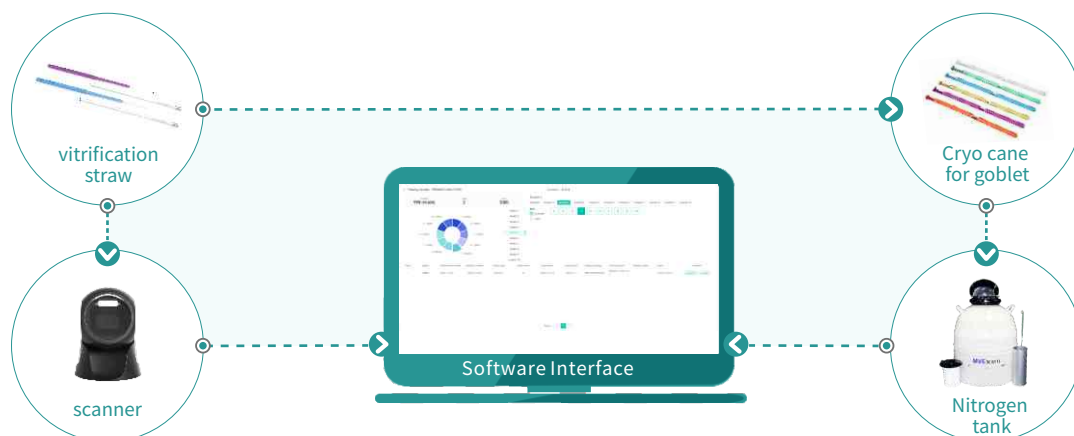
Marital Identity--Verification Interface

Freeze and Thaw (Display of Sample Position)

- During cryopreservation, using a scanner and barcodes to ensure consistency between patient and the specimen.
- Upon patient and location information being entered into the system, the visualization of storage positions is also realized, ensuring information consistency with the patient while simultaneously achieving sample thaw management and the release of storage space.



Visualization of sample storage position



Product Advantages

Comprehensive product safety testing

From the radiation amount of the verification equipment, the raw material and finished product of the RFID tag are carried out a comprehensive high-dose mouse embryo assay to ensure the safety of the product.



CE certificate



Mouse embryo assay



Intellectual property certificate

Adopt the recognized safe RFID frequency of 13.56MHz, which pass the domestic and international certification

Safe frequency

The RFID tag meet the medical standards, and with mouse embryo assay

Safe material

The RFID tag has a unique global ID code, and the data content is encrypted and protected, which ensures high security and confidentiality and long-term for data storage

Safe information

Hardware Integration

- The integration of RFID tag recognition embedded in hardware devices and various types of hardware makes the operating table cleaner, which improve the operation convenience and security



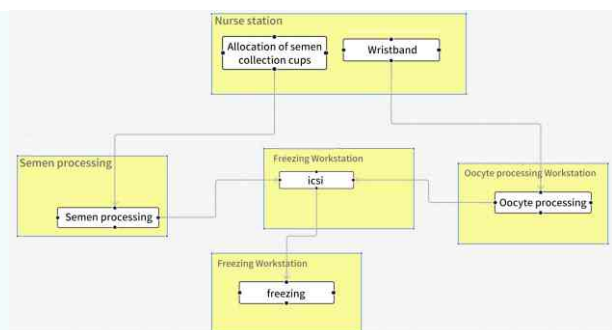
Software Integration

- Visual verification data to doctor and patients makes the operation more transparent.
Traceability: All operators' log data cannot be modified, with integrity and traceability. It can also be used for statistics of medical related results.

Female	ID Number	BirthDay	Male	ID Number	BirthDay
BAZELU	1354070232	1997-03-31	WANG DO	1351040322	1999-03-19
WANG QIN	1354020472	1996-05-24	QIAO HUANG	1354050872	1992-10-06
YIP ZHANG	1354020571	1992-12-07	JIN ZHANG	1354050887	1996-04-17
JIAO QIONG	1354020472	1996-05-24	WANG	1354050872	1992-10-06
CHEN	1354020571	1992-12-07	YIP	1354050887	1996-04-17
WANG LI	1354020472	1996-05-24	QIAO HUANG	1354050872	1992-10-06
WANG LI	1354020571	1992-12-07	WANG	1354050887	1996-04-17
JIN ZHANG	1354020472	1996-05-24	WANG	1354050872	1992-10-06
LI WANG	1354020571	1992-12-07	WANG	1354050887	1996-04-17
LI WANG	1354020472	1996-05-24	WANG	1354050872	1992-10-06
LI WANG	1354020571	1992-12-07	WANG	1354050887	1996-04-17

Customized process

- The process of this system can be customized as per your demand and implemented without additional processing and compromising sample safety.



Hardware devices

Label printer

RFID label printer
(RFID label and wristband label)



Freezer label printer
(Freezer label)



RFID Reader

Four-sided antenna
(For sperm preparation room)



Concave antenna
(Used under the stereo microscope)



Three-sided antenna
(Used under stereo microscope)

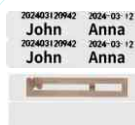


Consumables

Big label



Small label



Wristband label



Freezer Label



ID CARD





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