

# CT Scan-3680

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## PET/CT Scan



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

►► **Designed for clinical applications, endowed with cutting-edge technology**



CT Scan 3680  
Full-time  
intelligent PET/CT

Aurora backlight TOF noise reduction:  
**best noise reduction in the industry**

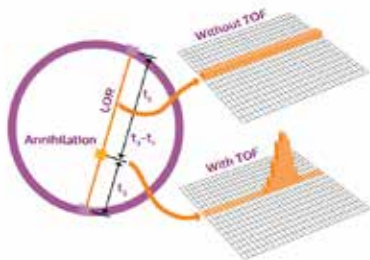
Free breathing + cardiac imaging:  
**Auxiliary diagnosis**

Passive QC & full-time correction:  
**Consistent performance**

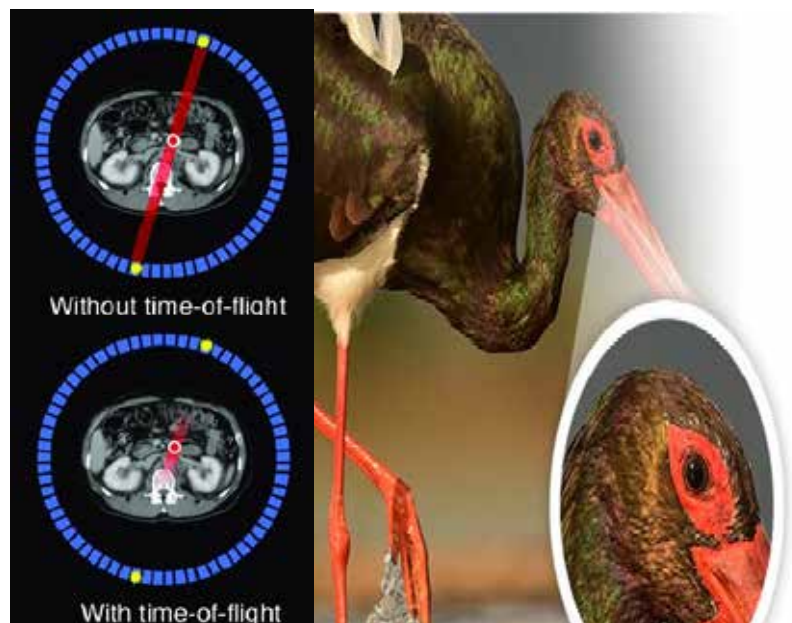
►► **TOF - PET/CT Trucial Technology for now and the future**

**Traditional technology**

distribute probability  
equally among LOR



**TOF**  
concentrate  
activity around  
the lesion



**TOF reduces scan time and improves image quality**

- ▶▶ **Backlight noise reduction: the best NECR in the industry; SNR increased by 200%**



**Challenges of backlight photography**  
Enormous useless background light covers up the objects to be photographed



T: True count



S: Scattered count

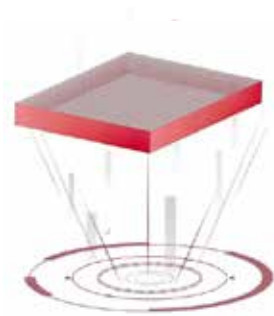


R: Random count

**NECR is directly related to signal-to-noise ratio**

### The Challenge of PET Imaging

A large number of random and scattered counts covers up the true count

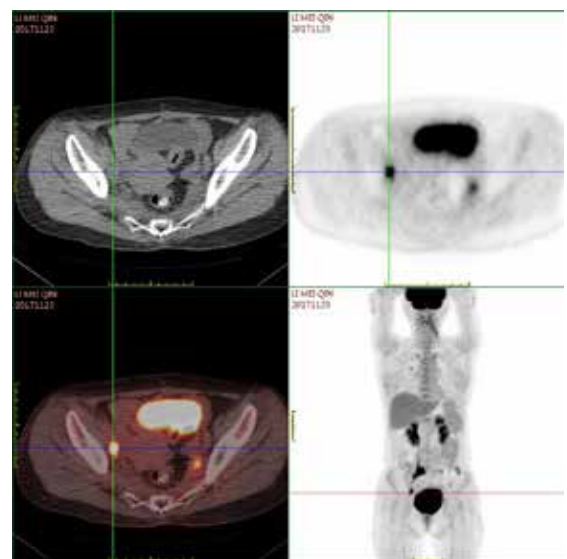
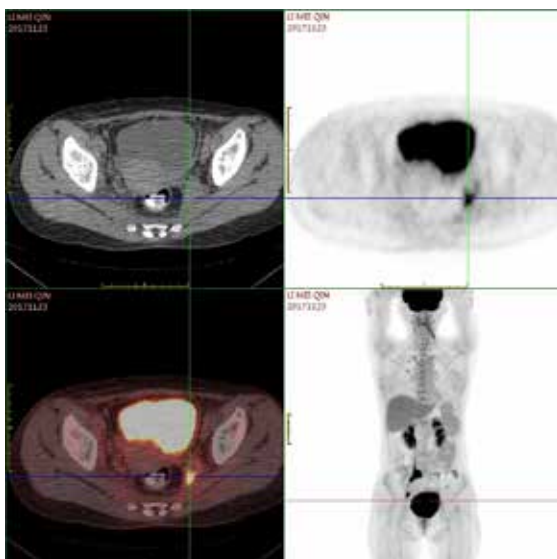


Highlight LYSO Crystal

### Detector performance optimization

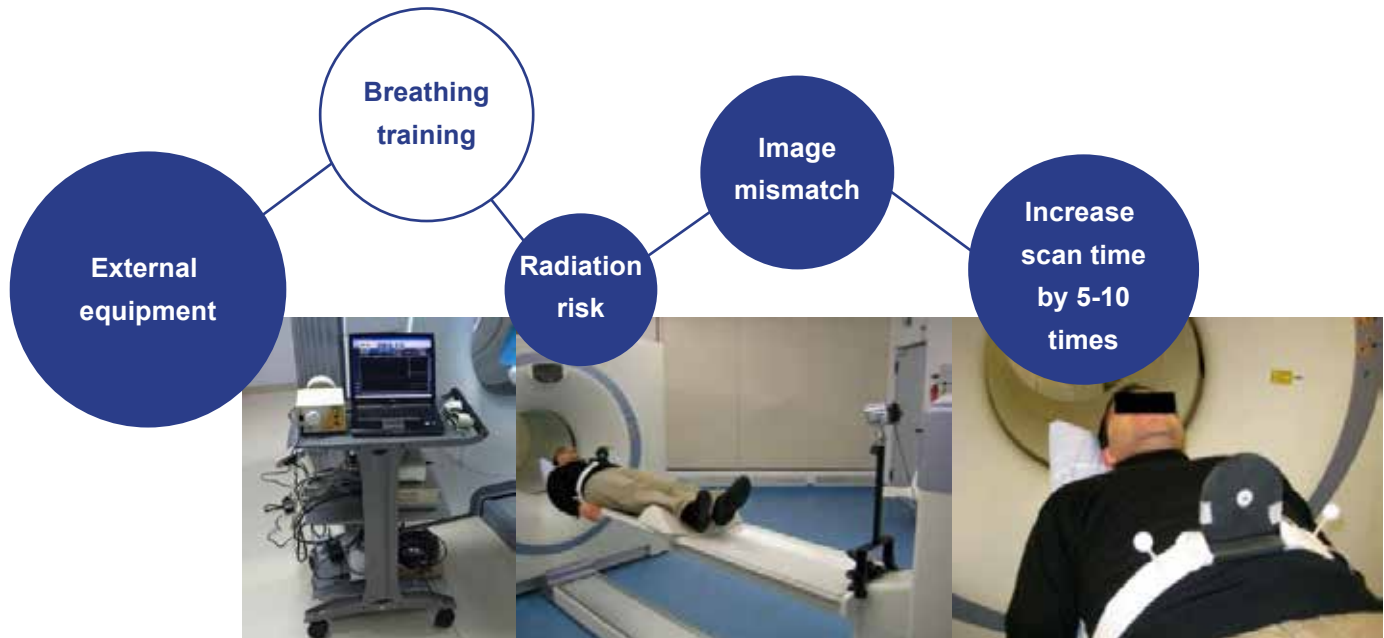


- ▶▶ **Excellent low-dose imaging**



**165cm 52.5kg 3.4mCi, 0.06mCi/kg (Normally 0.1mCi/kg)**

►► **Dilemma of current PET/CT respiratory gating technology**



Considering the complicated using conditions (high degree of patient cooperation is required), and this hinders willingness to use it

►► **Free breath-assisted diagnosis: accurately detect the tumor, so that the moving focus can not be hidden.**

**mSearch :**

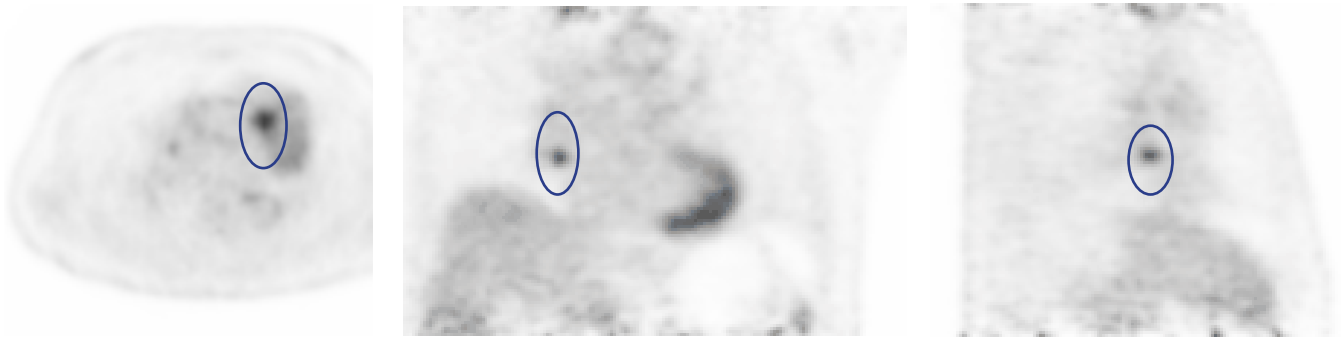
intelligently searches motion information from a large amount of PET data

**mLock :**

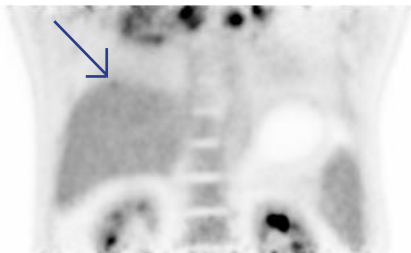
automatically locks the maximum moving direction of a moving target by quickly predicting the moving target

**mTrack:**

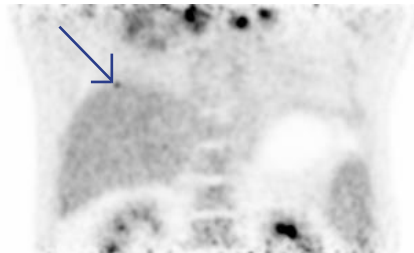
intelligent tracking of moving targets, accurate extraction of moving target information



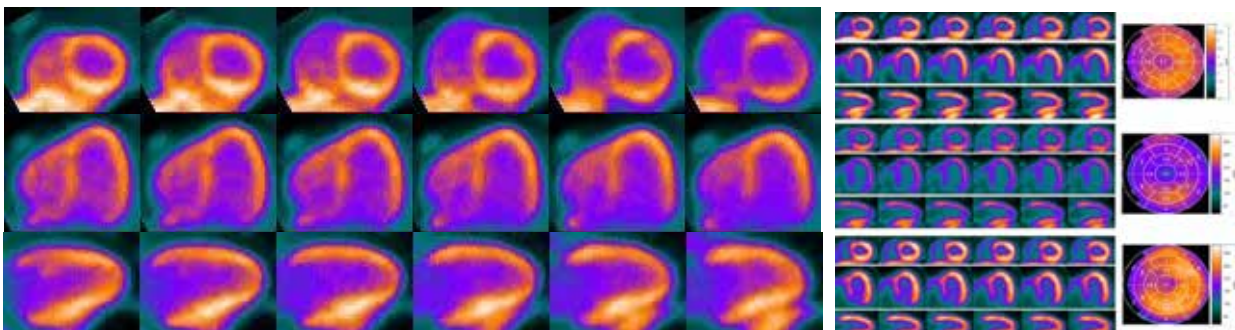
## ►► Clinical advantages of intelligent motion tracking



Traditional static imaging

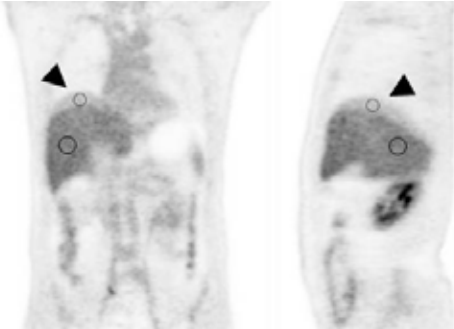


Intelligent motion tracking respiratory imaging

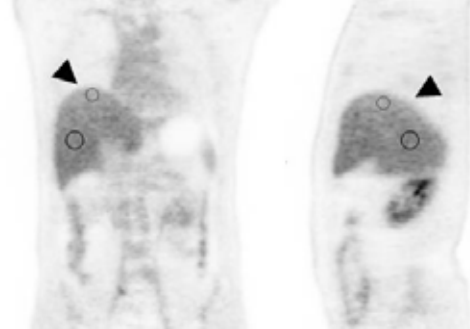


Intelligent motion tracking cardiac imaging

►► **Intelligent attenuation correction: eliminating artifacts caused by CT attenuation correction**



CT attenuation correction imaging



Intelligent attenuation correction imaging

- Eliminate artifacts caused by CT attenuation correction
- The quantity of SUV is more accurate.
- Reduce CT radiation dose

►► **Quality Control ensures stable operation**



Conventional PET/CT quality control  
(radioactive source)



- Radioisotope import approval form
- Radiation safety permit
- Waste source recycling commitment

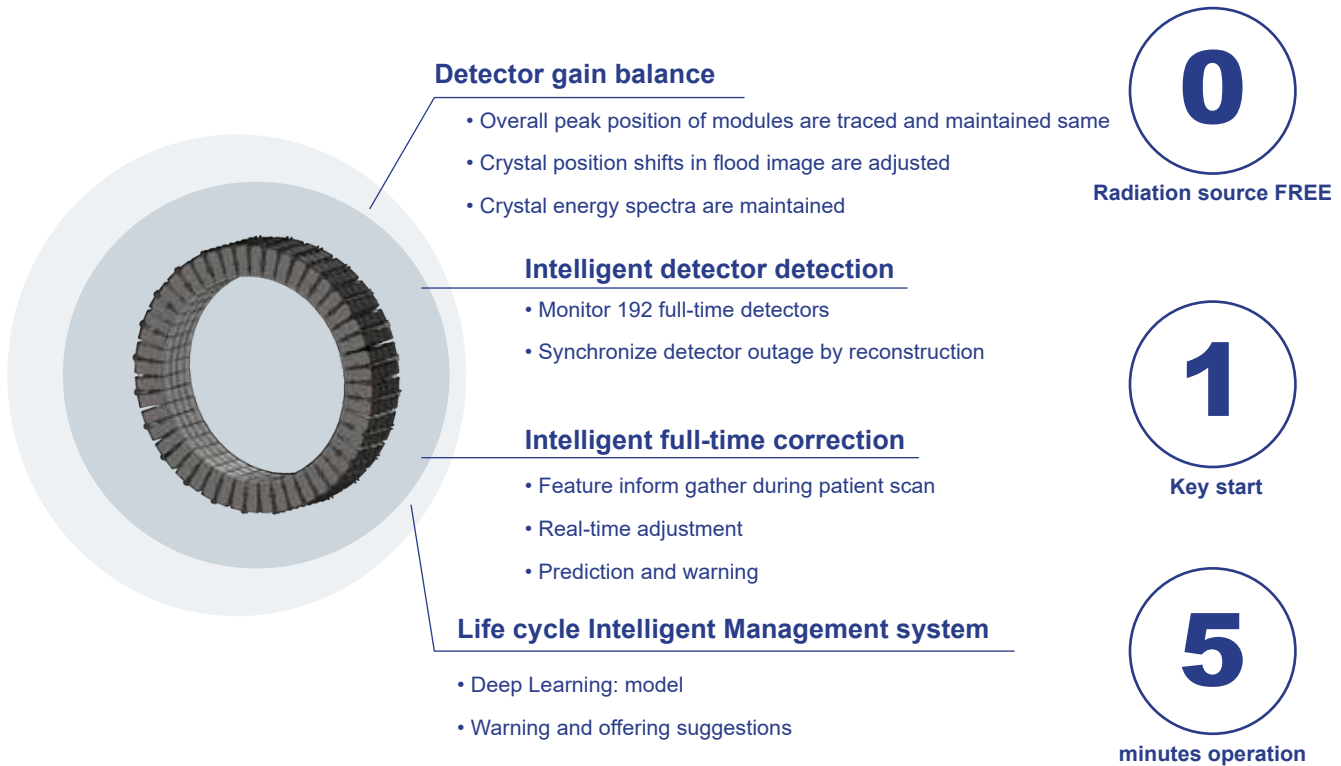


Long-term absence  
of quality control

Normal image



## ►► Radiation source free quality control : passive, efficient and fast



**Device  
cloud**

### Remote real-time monitoring A prior model of machine learning

Real-time monitoring of equipment health status, intelligent early warning, remote maintenance of equipment



**Service  
cloud**

### Optimize the process of Nuclear Medicine AI Technology

Standardize the workflow, fully empower the primary care providers, improve the work efficiency and improve the medical care service

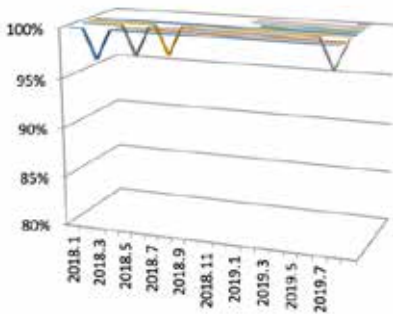


**Image  
cloud**

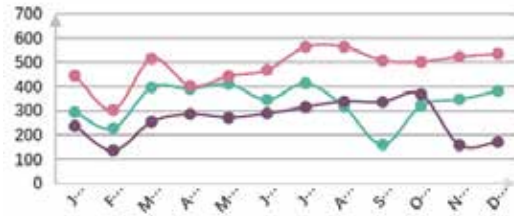
### Multidisciplinary MDT remote consultation Block chain technology

Based on the image data, the remote consultation platform of nuclear medicine is built by docking the medical history, examination and other information.

## ►► The stable operation ensures the efficient work



Guarantee of more than  
scanning time in  
work hours **95%**



Throughput:  
cases per day **20-30**

The synergy from stable hardware, intelligent QC and equipment monitoring cloud platform, PoleStar can provide an uptime guarantee of 95%+. It can maintain both a high throughput and high performance stability.

## System Specifications

Crystal Material	LYSO Crystal
Crystal Size	3.73 mm×3.73 mm×20 mm
Number of Detector Blocks	192
Number of Crystals	37632
Sensitivity	10.5 cps/kBq
Timing Resolution	≤420 ps
Noise Equivalent Count Rate	215 kcps
Tube Heat Capacity and Anode Cooling Rate	8 MHU
Maximum Rotation Speed	0.39 s
Maximum Generator Power	80 KW
Spatial Resolution	≥ 20 lp/cm (0% MTF)
Small Focal Spot Size	0.6 mm×1.2 mm



## ►► Parameter Comparison

System Specifications	PET/CT Scan 3680	GE Discovery7 10	Siemens mCT	Philips Ingenuity
Crystal Volume	10,471 ★	9,144	10,383	9,974
Number of Detector Blocks	196 ★	64	169	N/A
TOF Timing Resolution	420 ★	544	540	495
Sensitivity	10.5 ★	7.5	9.5	7.4
Noise Equivalent Count Rate	215 ★	130	175	120
NEMA Spatial Resolution	3.5 ★	4.9	4.5	4.3
Detectors Slice	64	128	64	128
Tube Heat Capacity and Anode Cooling Rate	8 ★	7	7.3	8
Spatial Resolution	20 ★	20	20	24

## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



## About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

## Our Products & Technologies



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Double Beam



Infra FTIR



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Chromatograph  
3007



Optima Gas  
Chromatograph  
2979 Plus



Flash  
Chromatograph



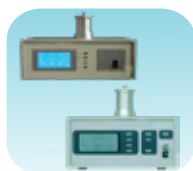
Atomic Absorption  
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Liquid Particle  
Counter



Optical Emission  
Spectrophotometer



DSC/TGA



Semi Auto Bio  
Chemistry Analyzer



HEMA 2062  
Hematology  
Analyzer



Micro Plate  
Reader/Washer



URINOVA 2800  
Urine Analyzer



Total Organic  
Carbon 3800



Fully Automated  
CLIA



NOVA-2100  
Chemistry Analyzer



PCR/Gradient PCR/  
RTPCR



TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system

## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



# Analytical Foundation

1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## Reach us @



**HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)**

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)  
[info@analyticalbiomed.com](mailto:info@analyticalbiomed.com)

W: [www.analyticalgroup.net](http://www.analyticalgroup.net)  
[www.hplctechnologies.com](http://www.hplctechnologies.com)  
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