



CardioOnLineEurope

Specialisti in telemedicina



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TECHNOLOGIES POWERED BY

CARDIOLINE

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Cardio On Line Europe, healthcare facility authorized to carry out specialist cardiology and pulmonology activities with Executive Resolution no. DD14096/2023, was born in 1996 from an entrepreneurial conception of a manager and a doctor. Since then, it has been at the top of national multi-utilities with a prominent position in different business areas, a balanced mix between reporting activities and services offered. Thanks to its production assets, the investments made and ongoing, and its territorial roots, Cardio On Line Europe is today one of Italy's main leaders in telemedicine. Experience, original ideas and solutions, expertise and flexibility to respond to different needs that demanded by the market, become ethical values of a brand that is the foundation of Cardio On Line Europe's national and international success.

Cardio On Line Europe's mission is the development of telemedicine in the cardiovascular field; in 2004 it set up an Operative Centre, physically monitored 24 hours a day, 365 days a year by Specialised Operators and Cardiologists who, in real time, report the examinations received and offer their specialised consultation online. In the same year, it launched Italy's most advanced emergency Telecardiology Project, which has connected a network of three hundred and eleven 118's Emergency Service stations located across the entire Apulia Region. The Telecardiology system is reliable and easy to use, and allows any user equipped with a portable digital electrocardiograph to record a standard 12-lead electrocardiogram in just a few seconds and wherever he or she may be, send it to the Operative Centre, to receive a teleconsultation.

Cardio On Line Europe develops business strategies oriented towards a value system aimed at realising a business model capable of satisfying in a balanced manner the legitimate expectations of different stakeholders while fully protecting the environments and customers with which it operates. Know-how and background acquired **over 27 years** of uninterrupted activity and validity of the service provided in **more than 2,500,000 procedures**, all managed in real time and with immediate specialist advice, have made it possible to frame and resolve multiple situations in which the use of the telecardiology method has proved ideal, sometimes truly life-saving. This is documented by the hundreds of thousands of ECGs performed by private and public customers, including the Italian Navy, the Italian Air Force, and some Prison Institutions, in addition to the **859,245 ECGs** performed in emergency-urgency: the latter alone contributed to a 50% reduction in mortality from heart attacks in the Apulia Region (source: Regional Epidemiological Observatory).

The Operative Centre located in Bari, Apulia, has information technology, hardware infrastructures, redundant telephone, electrical and electronic systems, certified and constantly upgraded software, technical staff and cardiologists who are constantly engaged in training and updates, operating protocols designed according to the needs of each client, customer satisfaction and many other peculiarities, which make it a reference point in Italy and beyond. Cardio On Line Europe's ability to innovate and the cutting-edge technological solutions that distinguish its services derive from its constant commitment to research, also benefiting from collaborating with prestigious university professors specialised in Telemedicine-related issues. Indeed, numerous scientific studies and publications have been issued in leading medical journals, as well as appearances at the most important world congresses on telemedicine as guest speakers, which have literally 'launched' the company on the international scene, whose structure has now become a destination for delegations from all over the world.





In full compliance with new European Regulation 679/2016 (GDPR) and considering how crucial the service provided implies mandatory processing of sensitive data contained in Cardio On Line Europe's databases, since 2009 the company has acquired an Integrated Certification, nationally and internationally applicable for an Integrated Management System in Telecardiology according to ISO/IEC27001:2017 for R. I.D. (Confidentiality, Integrity and Availability) of sensitive data and ISO9001:2015 for quality of processes provided in "*Design and provision of telemedicine services applied to: telecardiology, in the context of electrocardiographic reporting 24 hours a day, 7 days a week, with "online" cardiology consultancy, to the reading and analysis of cardiac and blood pressure Holters reported by cardiologists, including exams carried out during transoceanic and/or aerospace navigation received via satellite connection, and to telepneumology in the context of the interpretation of spirometry and cardiorespiratory monitoring reported by pulmonologists. Provision of training services (in person or remotely) for the use of the methods and related reporting services, carried out - upon request - also in English*". Cardio On Line Europe has also obtained ISO9001 for its Customer Qualification Service: a Quality seal, the result of checking that the activities carried out comply with regulations and standards in force, awarded to those who strictly comply with procedural routines. An additional security for the end Customer who benefits from the Telemedicine services provided by Cardio On Line Europe through its Users.

Link <https://www.cardioonlineeurope.com/news/Certifications.pdf>

In 2010, Cardio On Line Europe expanded the organisation of its structure with the implementation of a central unit dedicated exclusively to cardiac holters and ABPM monitoring in telemedicine; with more than **240,000** reports made in a very short time from the disassembling the device, the Holter Division, which has become a market leader and a strategic unit for the Company, supplies software, devices and Holter reporting services in pharmacies, GP surgeries, diagnostic and home care centres, polyclinics, hospitals, nursing homes, RSAs and others. The results achieved, in terms of positive feedback from customers and patients, come from the high standard of quality imposed by the protocols observed in the Holter Division. **Each examination is analysed, interpreted and reported exclusively by a cardiologist.** Focus on the software used, the modularity of the workstations, the reporting times, the alert service for each pathological result, the observation of the regulations in force and the professionalism of the personnel employed, make the Holter Division one of the most important Business Units of Cardio On Line Europe.

In 2016, Cardio On Line Europe activated **CardioService**, a service created as a result of several leading companies' requests in the market for sales of electrocardiographs and Holter recorders, together with the management platform, in order to be able to offer their customers examination reporting services, recorded and transmitted through devices and software marketed by the same companies. The background and know-how acquired over time with **CardioService** reporting activities have enabled Cardio On Line Europe to extend its analysis and consultancy activities - with the same characteristics in terms of time and homogeneity of reports - to all those potential customers who, on the other hand, although having a device capable of recording and transmitting an electrocardiogram or a Holter (or other closely related services), lack the skills to independently manage a Telemedicine service.

The well-established experience in the specific field and the guaranteed provision of reporting services 24 hours a day, 7 days a week, makes it clear that we can offer the same performance to every customer interested in the service. On the Italian and international Telemedicine scene, there are now numerous platforms and various providers that rely on web-based solutions or smart applications connected to the Internet and linked to networks of available specialists to provide Telemedicine services, solutions that do not, however, allow real time referrals with 'on line' cardiology consultation. By joining **CardioService**, these companies have the opportunity to provide their customers with cardiac and ABPM Holter, electrocardiogram and spirometry reporting services, H24, 365 days a year, while maintaining their own settings, format, template and, above all, their own brand. Cardio On Line Europe, thanks to its Operative Centre physically supervised H24 by technicians and cardiologists, is available to engineer flow-charts exclusively dedicated to any company providing Telemedicine services, enabling them to provide ECG reporting in real time and with "on line" cardiological consultancy, an indispensable peculiarity considering



the advantages of promptly diagnosing a serious pathology and allowing intervention in time to safeguard an individual's health. All reporting services (ECG, cardiac and ABPM Holter) can also be provided in English on request.

Founded as a company targeting national and European markets, over the years Cardio On Line Europe has established itself with its services at an international level. In June 2016, following requests from users living abroad to be able to use telecardiology and Holter services in telemedicine, the **"Foreign Division"** was established: a staff composed by technicians who receive the examinations and by cardiologists who analyse them and in real time report them, offering their cardiological consultancy online, **exclusively in English**. Although parallel and distinct, the ECG and Holter reporting services merge into the daily routine of Cardio On Line Europe's activities.

The values on which Cardio On Line Europe grounds its strategy are customer satisfaction, health and safety, concern for privacy, continuous improvement, respect and customer valorisation, service efficiency and supply quality. Furthermore, activities focus not only on technological innovation but also, and above all, on developing Telemedicine and Home Care services with a high specialised medical content, making them accessible and user-friendly directly to citizens. The commitment is particularly focused on Telecardiology in analysing electrocardiograms and Holter, bearing in mind that cardiovascular diseases constitute the leading cause of death in the population as a whole and in the elderly.

Precisely for this purpose and to answer ongoing territorial requests, Cardio On Line Europe proposes the **TDS**, an acronym for **Telemedicine Digital Station**, a service designed for all healthcare professionals. The aim is to improve the provision of first-aid services with the help of telemedicine, which itself allows instrumental checks to be carried out and specialist consultations to be offered cheaply and quickly. With the **TDS**, indeed, an exclusively digital multidisciplinary workstation using state-of-the-art **CARDIOLINE** equipment for the advanced and high-performance management of telemedicine services, it is possible to provide high added-value services such as electrocardiograms, cardiac Holter and ABPM Holter independently. ECGs are reported in real time with online cardiology consultation 24 hours a day, every day of the year, and the equipment offered is also certified for paediatric use. Cardiac Holters, whose offered technologies allow capturing 3- and 12-lead recordings, from 24 hours to 9 days, are reported within 48 hours of being received on the platform, while ABPM, whose service is operational 7 days a week from 8 a.m. to 8 p.m., within 45 minutes.

Results are then shared with Operators through the CARDIOLINE WebApp, a web-based digital platform (with its own MDR) certified by the Ministry of Health Medical Device Class IIa (rule 10 of Annex IX of Directive 93/42/EEC and its amendments, through the Notified Body TUV, registration identifier BD/RDM n°1353629, source: www.salute.gov.it). Alongside the above-mentioned features and for further customer protection, an additional guarantee of reliability at a medical-legal level is ensured thanks to the apposition of a "certified signature" on the reports, in full compliance with European Regulation 910/2014 (eIDAS) on digital identity in the field of qualified electronic signatures. The Certification Provider is Namirial SpA and its reliability is guaranteed by the Adobe Approved Trust List and European Trusted List.

Link <https://www.cardioonlineurope.com/servizio/telemedicina-digital-station/?lang=en>

For quite a while now, the company has been ready and structured to effectively and efficiently manage intensive work activities that result from the use of telemedicine, both by General Practitioners engaged in taking care of chronic patients, and by the 'Service Pharmacy' called upon to provide, considering its coverage across the country, diagnostic tools (ECG, cardiac Holter, ABPM Holter and spirometry) designed to prevent and monitor cardiovascular pathologies. All the services provided by Cardio On Line Europe are a response to new trends in healthcare systems that have to cope with the constant ageing of the population, improved lifestyles and greater awareness and information by citizens, which translates into more active participation in choices related to their own health, safety and well-being.



COVID-19: we have faced with a sense of great responsibility the serious international emergency that, together with the social, cultural and economical structure of an entire system, has affected not only Italian companies, but the entire direct and indirect allied industries. Certainly, the way we live our daily routines has changed, and it is evident how it is still changing over time. That being said, given the period of emergency experienced and the measures established for its containment and management, it was necessary to take action in the area to reduce difficulties for the Health Service in handling numerous requests from the population. Precisely those people who, because of the difficulty of travelling, the fear of contagion, or the very long waiting lists at the hospitals (almost collapsing) for the treatment of emergencies, have objective difficulties in relying on the public service. The pandemic, therefore, has been that vehicle which, spreading throughout the world, has severely tested even the most efficient health systems. And this is how home care played a strategically crucial role. It was therefore necessary to establish a shared operational protocol capable of combining patient needs with those of his or her family. It is within this context that Cardio On Line Europe has activated the possibility of a remote (or remotely controlled) monitoring service for patients following hospitalisation or post-hospitalisation. The aim is clear and obvious: to avoid overloading hospital facilities by keeping paucisymptomatic or asymptomatic patients at home, who nevertheless require constant and careful medical observation, as the risk of unexpected and rapid deterioration is always high.

The development of Telemedicine culture and the possibility for it to be 'within the reach of the citizen' in terms of service usability meant that it was specifically the territory that asked Cardio On Line Europe for the possibility of service diversification. Therefore, to answer this demand, the company - which for more than 24 years has verticalised its expertise on cardiology diagnostics - launched a scouting exercise aimed at a market analysis that would match Cardio On Line Europe's experience and background. After cancer and heart disease, **Obstructive Sleep Apnea Syndrome (OSAS)** is, directly and indirectly, the third leading cause of death worldwide. OSAS is a pathology related to repetitive partial or complete obstruction of the first airways in the throat, which is largely under-diagnosed due to both a lack of information about it and confusing symptoms. It is usually manifested by daytime sleepiness that originates from disturbed sleep due to obstructed airways, which cause interrupted breathing. The way to diagnose this pathology is to perform cardio-respiratory monitoring (so-called polysomnography), a non-invasive examination involving the detection of certain indicative and significant parameters for the pulmonologist interpreting the examination.

Cardio On Line Europe provides its customers with technologies and services that, also in this case, provide - in case of pathological diagnosis - a direct recall to the patient by the referring specialist in order to indicate the most appropriate therapeutic pathway without bypassing the professional figures who know the patient's clinical and anamnestic history. Technology and platform are respectively Resmed & Linde Medica with whom Cardio On Line Europe has partnered. Having become aware of the close correlation between cardiology and pneumology, Cardio On Line Europe, together with cardiorespiratory monitoring, introduces spirometry into the panel of reporting services offered, by performing tests acquired with Cardioline technology. In the report, prepared and signed by a pulmonologist, FVC and FVC-V1 are included and evaluated.



29 June 2023: as part of an agreement with the Italian Air Force for the supply of telemedicine services, there is also technology and a lot of passion made in Cardio On Line Europe in **Virgin Galactic's important suborbital flight**, the first dedicated to research in microgravity, with which the American company tests the terrain of space tourism. All the occupants of White Knight Two, the mother plane that brought the VSS Unity shuttle up to an altitude of approximately 15 kilometers and then released it and allowed it to continue its journey, were in fact monitored at a cardiac level by Cardio On Line Europe. The astronauts, in fact, were equipped with a Cardioline Walk400h 12-lead cardiac Holter with the aim of verifying cardiac reactions in the intense 75 minutes between launch and suborbital flight. The Virgin Galactic mission is in fact an important first also for Italy, which together with the Air Force and the National Research Council has been the protagonist of this new role that suborbital flights could have for research. «Congratulations to the Air Force, the National Research Council and all the personnel involved for the success of the Virtute 1 mission», came from the president of the Council Giorgia Meloni. It is "an achievement that represents a very valid example of institutional collaboration and a first stage towards the development of suborbital flight in our nation". The Chief of Staff of the Air Force, Air Force General Luca Goretti, was also satisfied, for whom «space flight is an aeronautical domain to be explored and represents a technological challenge where national technical and industrial skills can play their part in full title." The suborbital flight dedicated to research «is a novelty in the field of access to space and experiments in microgravity conditions», noted the president of the Cnr, Maria Chiara Carrozza. Representing the two institutions on board the Galactic 01 mission were Colonel Walter Villadei and Lieutenant Colonel Angelo Landolfi, both from the Italian Air Force, and Pantaleone Carlucci, engineer and researcher from the Cnr. After a salute with the Italian flag, the three protagonists of the Italian Virtute 1 mission (Italian flight for suborbital research and technology) began to conduct the 13 experiments planned in the mission, trying to make the most of the approximately 3 minutes of microgravity. The quality of the acquisition of the electrocardiographic signal by the device in orbit and in microgravity conditions is perfect: the reports, produced by the Cardio On Line Europe team of cardiologists, were edited with the collaboration of Colonel Landolfi who indicated the times and moments of the flight, the purpose of the experimentation envisaged by the partnership.

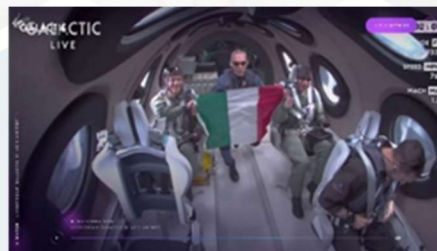


Ultime notizie

Decollato il primo volo spaziale privato con equipaggio italiano

È partita da uno spazio porto in New Mexico la prima missione di Virgin Galactic, l'azienda dell'imprenditore Richard Branson. Si tratta del primo volo suborbitale privato della compagnia. A bordo l'equipaggio è tutto italiano.

il Sole 24ORE
1 minuti





Why choose Cardio On Line Europe

In order to provide Telemedicine services, in compliance with all the regulations currently available, in compliance with Community policies in relation to Privacy, and with the high added value of "on line" specialised consultancy for each report produced, technological, infrastructural and organisational characteristics are required to guarantee reliability, safety and diagnostic pertinency to the end Customer.

Cardio On Line Europe offers its Users and their Customers:

- ✓ Experience gained from 27 years of uninterrupted H24 activity in the cardiological telemedicine field;
- ✓ Specialist background and know-how gained from reporting more than 2,500,000 ECGs in real time with online cardiology consultation and more than 240,000 Holter cardiac and ABPM monitors;
- ✓ Operative Centre physically supervised by Cardiac Technicians and Cardiologists, 24 hours a day, 365 days a year;
- ✓ Specialised team engaged in receiving, analysing and reporting the examinations received;
- ✓ 30 reporting stations for simple and complex, proprietary and third-party digital systems;
- ✓ Technology architecture (IT, electrical and telephone) redundant on 3 security levels;
- ✓ Transition4.0 configuration and use of digital interconnection systems between the proposed technologies with related tax benefits;
- ✓ [ISO9001:2015 Certification](#) (CSQA Certificate No. 40635) for the quality of the processes provided, in the specific areas of application (ECG reporting, cardiac and ABPM Holter, Spirometry, Polysomnography, FAD);
- ✓ [ISO/IEC27001:2017 Certification](#) (CSQA Certificate No. 40636) for Information Security, pursuant to Regulation (EU) 2016/679 (GDPR);
- ✓ [ISO9001:2015 Certification](#) (CSQA Certificate No. 68804) for Customer Qualification Service (SQC) to identify correct compliance with current regulations;
- ✓ WebApp platform certified by the Ministry of Health Medical Device Class IIa;
- ✓ Strong signature (by affixing OTP) on the reports produced, in compliance with Regulation (EU) 2014/910 (eIDAS) on qualified electronic signatures;
- ✓ Substitute storage (in-house) of examinations in RAW format as required by current regulations;
- ✓ Equipment certified for paediatric use, in compliance with the technical booklet;
- ✓ Full-risk technology guarantee with replacement of defective equipment within 48 hours;
- ✓ Deresponsibility of the Customer in correlation with R.I.D. (Confidentiality, Integrity and Availability) of sensitive data, through DTA agreement;
- ✓ 1st level technical Help Desk, available 24 hours a day, every day of the year;
- ✓ Direct Customer Training, at Cardio On Line Europe premises or in FAD (Distance Learning), [ISO9001:2015](#) certified mode;
- ✓ Real-time ECG referral with online cardiology consultation, 24/7;
- ✓ Cardiac Holter referral within 48 hours after uploading the examination to the platform;
- ✓ ABPM Holter referral within 45 minutes of receipt, from 8 a.m. to 8 p.m., 7 days a week;
- ✓ Spirometry referral within 24/48 hours after uploading the examination onto the platform;
- ✓ Polysomnography referral within 48 hours of receipt notification with "Hello, how am I?" service;
- ✓ "Alert" service for any report found to be pathological or prone to be pathological, with patient direct recall.

Cardio On Line Europe, because difference is in the details.



CARDIO ON LINE EUROPE | REFERENCES





www.cardioonlineurope.com

CARDIO ON LINE EUROPE S.r.l.

sede Via Principe Amedeo, 25 - 70121 Bari (BA)
tel. 080 5613578 | Cap. Soc. 100.000,00 € i.v.
Part. IVA n. 04871010726 | C.C.I.A.A. Bari n. 290463/96
mail info@cardioonlineurope.com
pec cardioonlineurope@pec.it



AZIENDA ASSOCIATA



AZIENDA CERTIFICATA

