

THE WORLD OF CARDIOLOGY

"CC Iliescu" Department of Cardiology - A short history

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Cardiology was defined as a separate medical specialty in our country faster than in other countries, in the 1960'. A crucial role in this was played by the founder of Romanian cardiology, Prof. Dr. CC Iliescu.

The first cardiology clinic in Romania was founded in 1959 and it was named *The ASCAR Cardiology Clinic*.

The clinic was part of the Faculty for the Training and Specialization of Doctors and Pharmacists (FPSMF), within the Medicine and Pharmacy Institute - Bucharest. The faculty for Training and Specialization was founded in 1958 by turning the Institute for Training and Specialization for Doctors and Pharmacists (dependent on the Ministry of Health) - founded in 1952 - into a Faculty. The newly founded faculty was naturally included in the Institute for Medicine and Pharmacy, Bucharest.

The one who strived and finally succeeded in founding this school was Prof. Dr. Constantin C. Iliescu. He was then named head of the clinic, occupying this position until 1962, when he retired. The cardiology clinic was named ASCAR Cardiology Clinic because it was within the ASCAR Hospital (CARDiac Assistance - ASistentă CARDiacilor). The ASCAR institution was founded in 1945. A centre for the care of cardiac patients was a novelty not only for Romania, but for the entire world. It was the first institution of its kind in Europe, and the second in the entire world.

Besides the care for cardiovascular diseases it was also necessary to train doctors and specialists in cardiology for the entire country. Thus, the ASCAR clinic had a determining role in contouring cardiology in Romania. In the first year the clinic held specialization courses in cardiology for internal medicine specialists and later, for pediatricians. The duration of the courses was 9 months and 120 doctors graduated until 1965. In this way a cardiology network was created all around the country.

It is important to note that during this period, Prof. Iliescu used to visit newly inaugurated cardiology departments in order to see how the medical activity is being managed and to give an impulse through his presence. I can remember such a visit from 1963, from the Onesti hospital, where Dr. Florin Anghelescu, a fresh

graduate of the specialization courses, was working. I resident in internal medicine there during that year and this visit determined me to choose cardiology as a specialization. During the same period, 30 day courses for the initiation and *study of the electrocardiogram* were organized. During the 1965/1966 academic year *the speciality in for perfecting various areas of cardiology* was launched. Thus, a few areas such as congenital diseases, valvulopathies, ischemic heart diseases cardiomyopathy and later, phonocardiography were introduced in this program. These 1-2 month courses' goal was to refresh the existing knowledge and train specialists in the different subspecialties of cardiology. 3 week electrocardiography courses were also held in other centres in the country, such as Sibiu, Slatina, Craiova. Starting with 1965, internal medicine interns (nowadays residents) were allowed to participate to these courses, in order to become cardiologists. I am one of the graduates of this first course organized for interns. The 9 month specialization courses respected the following schedule: in the beginning a few introductory notions about the anatomy of the heart and large vessels, cardiovascular physiopathology, cardiovascular semiology and clinical examination. This was followed by a period dedicated to learning electrocardiogram (5 hours/day - without clinical activity) - 3 weeks; phonocardiography - 2 weeks; radiology - 10 days. Then, clinical activity was resumed and theory classes were held daily at 13:00 hours, except for Wednesdays, which were reserved to the presentation of a clinical case. The clinical cases presentation was done by a resident, respecting the exam methodology: 20 minutes to examine the patients, 20 minutes to structure the case, 20 minutes for the presentation (this methodology is now well known and still applied). The second participant/resident (afore named) made different comments and remarks in completion to the presentation, followed by questions and discussions with the colleagues in the class. The theoretical courses were held by the professor and lecturers. Some courses were assigned to the "little ones". Professor Iliescu, or one of the lecturers (L. Kleinerman and E. Viciu), took part in these courses held by the assistants. The course was followed by a private discussion "behind closed doors" with 2

partners. The course was analyzed regarding the way it was structured, correctness of the disseminated information, whether or not it was updated information and how the course should be. These lessons cannot be forgotten and it would be important if they were repeated nowadays. During the training period the participants worked for 5 months in the patient wards (ASCAR had 3 sections, with a total of 120 beds) and 2 month in the ambulatory (this had 8 consultation rooms). Every Saturday, in the ambulatory, Prof. Iliescu commented on some particular cases and paid great attention to how the charts were completed. Every case had a chart and congenital heart diseases and cardiac failure had special charts. This summed up to 110.000 charts. The doctors were encouraged to go with the patients to the electrocardiography laboratories (there were 3 such laboratories, 2 in the ambulatory and one for the patient wards), to the phonocardiography laboratories, radiology or heart catheterism. Regular testing was performed throughout the training period (especially ECG, Phono and later echocardiography) in order to evaluate the participants. Tests were also administered at the beginning of the training period, in order to assess the level of those entering the course. This made possible a comparison between the level of knowledge at the beginning and at the end of the training course. At the end of the course a committee appointed by the Health Ministry was appointed and the graduates who passed the examination (they usually passed) became specialist in cardiology. Some of the trainees were also involved in the clinic's scientific activity, which was mostly concentrated on congenital heart diseases - clinical and hemodynamic studies, valvulopathies, arrhythmias (one of Prof. Iliescu's greatest passions), myocardial infarction, arterial hypertension (I have forgotten to mention that in the ambulatory there was a special cabinet for patients with arterial hypertension). During this period the members of the clinic published a series of monographies: Infectious Endocarditis, cardiovascular functional exploration, Cardiomyopathies, Mitral Stenosis, Chronic Pulmonary Heart Disease, Arterial Hypertension etc (see **Annex**). The cardiology clinic and the whole of ASCAR rapidly became the centre of national education in cardiology, the place of origin for the cardiology network, the place where specialists were trained and methodology books were elaborated for training purposes. During this time, respecting the model of the hospital ASCAR several subsidiaries were inaugurated in Timisoara, Craiova and many cardiology departments were founded all around the coun-



Figure 1. Prof. CC Iliescu and some of his collaborators (1974)

From left to right: Dr. C. Parlog, Dr. R. Enescu, Dr. Hortensia Cionca, Dr. Anca Iliescu, Dr. P. Andreescu, Dr. Maria Moman, Dr. Lucia Serafim, Dr. Munteanu.

try. The ASCAR cardiology clinic was visited by many personalities from the world of cardiology, such as Paul Dudley White - the patriarch of american cardiology, De Bakey, L. Turner, Eliot Corday, O. Abbott, R. Bing, A. De Maria, etc. PD White wrote in the ASCAR Honour Book: "ASCAR is performing a pioneering activity in the vital field of preventing heart diseases". In 1960 the cardiology clinic had the following configuration: Prof. Dr. CC Iliescu head of clinic, Associate professor Dr. Lazar Kleinerman, Associate Professor Emil Viciu, Dr. Matei Iliescu - lecturer, Dr. Radian Petrescu - assistant, Dr. Georgeta Domocos - assistant, Dr. Constantin Baciuc - assistant, Dr. Paul Iacobini - assistant. Prof. Dr. CC Iliescu was also chairman of the newly founded Cardiology subsection of subsection of the Internal Medicine Section of the Medical Sciences Societies in Romania. In 1962 the subsection becomes an independent section, named the Cardiology Society - chairman, Dr. Petronela Vintila - secretary. Starting with 1961, annual cardiology conferences are being organized. A great role in the organization of these conferences was played by the Cardiology Clinic and ASCAR Hospital. In the future, most of the presidents and secretaries of the Cardiology Societies will come from this clinic.

Between 1962 and 1966 the clinic was ran by Associate Professor L. Kleinerman and by Associate Professor Emil Viciu (they ran the clinic alternatively). During this period the didactic activity aimed at training doctors continued, new laboratories were created (like the hemodynamics laboratory - led by Associate Prof. Kleinerman) and the electrocardiography laboratories were expanded - Dr. I. Loebel wrote the first romanian book on electrocardiography, Dr. P. Dumitru, Dr. Olga Du-



Figure 2. Prof. C.C. Iliescu

The painting is now in the Meeting Room of the University of Medicine, Bucharest.

mitrescu. Associate Prof. Viciu continued the studies on clinical and experimental electrocardiography, finalized with the editing, in collaboration with Dr. B Fotiadu and Dr. R Zamfirescu of a comprehensive treaty on electrocardiography. In 1964, the first coronary intensive care unit in Romania was inaugurated (by Prof. C. C. Iliescu), the first electrical conversions were performed and the first Romanian built pacemaker (built by Eng. Goldis, Dr. D. Draghici si Dr. Gh. Bunghez - 1965) was implanted.

In 1966 Prof. A Moga was named head of the clinic. He came from Cluj to occupy the function of health minister (1966 - 1969). During this period the clinic had the following componence: Aurel Moga - professor, head of clinic; Lazar Kleinerman - associate professor; Emil Viciu - associate professor, Matei Iliescu - lecturer, Ion Orha - lecturer, Radian Petrescu - assistant professor, Georgeta Domocos - assistant professor, Constantin Baci - assistant professor, Paul Iacobini - assistant professor, Oprisan Alexandrina - preparator, Eduard Apetrei - preparator.

Dr. Ion Orha - lecturer and Dr. Niculae Stancioiu - Prof. Moga's PhD student, were also transferred from Cluj. Dr. N Stancioiu was later appointed assistant pro-

fessor and in 1974 he became lecturer. Dr. N. Stancioiu activated in the clinic until 1981 when he was transferred to Cluj as Assistant Professor, initially in a Medical clinic and soon after, in the newly founded Cardiology clinic, due to personal efforts (the Cardiology clinic from Cluj was the second Cardiology clinic in the country). In the first few months after he became head of the clinic, Prof. A Moga presented the idea of turning the Cardiology clinic into an Internal Medicine Clinic, specialized in Cardiology. He was probably considering the model of the Cluj clinic where he activated until he came to Bucharest and where (and why hide the fact) he was worshiped by his collaborators, being one of the most well-known medical personalities in Romania. Despite all the influence he had at that time, as Health minister and then, President of the Romanian Medical Sciences Academy (until 1974) he did not succeed in fulfilling his plan. Prof. Iliescu was still active, he came to the clinic every day and still had enough influence to oppose such a project, unwanted by the entire staff.

Cardiology was rapidly evolving towards independence from Internal Medicine.

In this period, due to the efforts of Dr. I Orha exercise testing for coronary patients was started and the rehabilitation program was initiated. In the beginning the effort tests were done at the Center for Sports Medicine and then, in our clinic. After the death of Prof. Moga in 1973, Assistant Prof. L. Kleinerman became once more the head of the clinic. The ASCAR Cardiology clinic functioned since its foundation in the ASCAR building in Cosmonauts Square (nowadays Lahovary Square). Due to the "efforts" of some personalities from the Romanian medical world with political inclinations the Cardiology clinic and the entire ASCAR hospital were relocated in 1976 in the Fundeni Hospital. It is important to note that next to the ASCAR building there was a space destined (and all plans were made and approved) for a new building, in order to expand the ambulatory and include a Cardiovascular surgery clinic. The plans were approved and the construction was ready to begin. During this period the head of the clinic was Associate Professor L. Kleinerman, a good doctor and teacher and Dr. C. Parlog was manager of the ASCAR hospital. They accepted the relocation of the clinic without great opposition, but during those times not much could be done if a decision was made "at the top". The clinic's relocation also had positive aspects, but we are not going to discuss this matter in this article.

At the time of its relocation to Fundeni Hospital the clinic had the following configuration: Assoc. Prof. L. Kleinerman - head of clinic, Dr. Matei Iliescu - lecturer,

Dr. Ion Orha - lecturer, Dr. Radian Petrescu - lecturer, Dr. Georgeta Domocos - assistant, Dr. Petre Dumitru - assistant, Dr. Alexandrina Oprisan - assistant, Dr. Eduard Apetrei - assistant, Dr. Niculae Stancioiu - assistant.

Along with the relocation the clinic received a new name: *The Fundeni Cardiology Clinic*. The clinic continued its didactic activities within the Faculty for the Training and Specialization of Doctors and Pharmacists (FPSMF). Assoc. Prof. L. Kleinerman retires in 1976, the same year when the clinic was relocated to Fundeni and Dr. Matei Iliescu - lecturer is appointed to run the clinic. During those years academic promotions were "frozen", so many doctors were blocked in the same positions for many years. This was also the case of Dr. Matei Iliescu. He competently ran the clinic for almost 2 years, in a slightly hostile atmosphere (2 other lecturers were working in the clinic), but the general activity of the clinic did not suffer. Didactic activities went on without any impediments. In 1978 Prof. Costin Carp was put in charge of the clinic. He came from the Caritas hospital. Although Prof. Costin Carp was not a collaborator of CC Iliescu and he had never worked in ASCAR, he managed to run the clinic in the ASCAR spirit, ensuring without a doubt, its continuity. During this period the clinic continued to consolidate its position as a training and specialization center. Most specialists working in Cardiology or cardiology subfields, such as echocardiography, phonocardiography or invasive cardiology were trained in the Fundeni clinic. Prof. C. Carp was a very good clinician and he managed in a relatively short period of time to impose professionalism, sobriety and responsibility in the medical act. The medical act could not suffer from any political intervention. Then, as today, politicians ("the party") wanted to control everything (it was also a very difficult period), but this desire was not fulfilled regarding the medical field. Medical research was continued in the fields of epidemiology and rehabilitation (department led by Dr. I. Orha - this department took part in international programs such as the OMS program for myocardial infarction or the MONICA program), arrhythmias (one of Prof. Carp's favorite preoccupations), valvulopathies, cardiomyopathies, congenital diseases, arterial hypertension, etc. New diagnostic methods are introduced - initiated and developed by members of the clinic (an example is echocardiography - Dr. E. Apetrei). The first echocardiography courses in Romania are organized starting with 1982 and then, our clinic organizes National Symposiums on echocardiography, beginning with 1984.

Our involvement in the international cardiology scene is increasingly higher because of the efforts and stimulation of Prof. Dr. C. Carp.

In Romania, the Fundeni Cardiology Clinic plays an important role in the reorganization of the Romanian Society of Cardiology and in 1990 Prof. Carp is elected president of the Society of Cardiology and Dr. E. Apetrei is elected secretary.

After Prof. Carp's retirement in 1992 his position as head of the Fundeni Cardiology Clinic becomes vacant and is occupied after public competition by Conf. Dr. E. Apetrei.

In 1993 the academic staff of the Cardiology Clinic consisted of: Prof. Dr. Eduard Apetrei - head of clinic, Prof. Dr. Costin Carp - consulting professor, Assoc. Prof. Dr. Radian Petrescu, Dr. Petre Dumitru - assistant professor, Dr. Ioana Stoian - assistant professor, R Ciudin - assistant professor, I Coman - assistant professor.

Assoc. Prof. Dr. I. Orha moved in 1991 at the Floreasca Emergency Hospital as a Professor, head of the Medical Clinic. The didactic activities concerning training and specialization continued without interruption. Courses for resident doctors respect a program recommended by the European Union of Medical Specialties (UEMS) - Section Cardiology (Prof. E. Apetrei was in the board of this European forum between 1994 and 2011 and Prof. Dr. Carmen Ginhina is a member of this board since 2011). New courses were introduced - transesophageal echocardiography - 2002, vascular Doppler ultrasound - 2003, invasive cardiology - 2002. A total of 6-8 specialization courses are organized each year. A course of echocardiography was organized in Milan for 1 month in 1994 and 1995, with the support of Dr. Faletra. 24 cardiologists from the clinic and from other cardiology clinics in the country participated, to this training period. In 1993 the university courses for medical students were introduced for the first time in the clinic. At first 3 series of students were taught here each year, but later only 2 series were accepted (the clinic was overcrowded with residents and specialists). Shorter specialization courses were introduced (7 days and even 2 days, in week-ends). Attendance for these courses is still high. The clinic was visited by numerous personalities coming here for conferences, courses, debates, new methods of treatment. Some of the members of the clinic (Dr. R. Ciudin, Dr. I. Coman, Dr. A. Mereuta, Dr. C. Matei) went abroad for specialization courses, facilitating the introduction of new diagnostic methods and treatment. Research continues, books and cardiology treatises are written (see **Annex 1**). The Cardiology Clinic becomes in 2001 a CENTER FOR EXCELLEN-



Figure 3. 1991 - in the first line, from right to left: Prof. C. Carp, Prof. Patricia Come (Harvard, SUA), Conf. E. Apetrei and a group of students. In the back line: Dr. Carmen Ginghina.

CE, research center in Cardiology. This title was granted by the Ministry of Health. It is the first clinic in the country meeting the criteria for such a title (after a rigorous evaluation of research and didactic activities). The clinic runs research programs with partners from abroad. Due to our active involvement in international cardiology, the members of this clinic were elected to international comities, received honorary distinctions and rewards and were visiting professors in universities from the US (North Carolina) and England. In 1995 Prof. Apetrei is elected to the Medical Sciences Academy and since 2006 he is vice-president of this Academy and Dr. H C of the University of Medicine from Iasi (2007). In 2009 Prof. Dr. Carmen Ginghina is elected to the Medical Sciences Academy, fellow of the American College of cardiology and Prof. Dr. C. Macarie is also elected to the Medical Sciences Academy and fellow of the American College of Cardiology. Many members of the clinic were presidents of the Romanian Society of Cardiology: Prof. E. Apetrei (1994-1998), Prof. C. Macarie (1998-2002), Prof. Carmen Ginghina (2002-2005). Assoc. Prof. Dr. I. Coman is the elected president for 2011-2014 (see the book Short History of the Romanian Society of Cardiology).

In 1996 Dr. C. Macarie become an Associate Professor position and in 1997 second position of Associate Professor is occupied by Dr. Carmen Ginghina. Both positions were occupied after a open competition. In 1997 the clinic had the following configuration: Prof. Dr. Eduard Apetrei - head of clinic, Assoc. Prof. Dr. Cezar Macarie, Assoc. Prof. Carmen Ginghina, Dr. Ion Coman lecturer, Dr. R. Ciudin lecturer, Dr. Ioana Stoian lecturer, Dr. Andrei Carp Assistant Professor, Dr.

Adrian Mereuta Assistant Professor, Dr. Monica Rota-reasa Assistant Professor, Dr. Matei Costel preparator.

In 2002 a second Professor's position is opened and Assoc. Prof. C. Macarie occupies it after an open competition. In 2003 a third position of Professor is opened and is occupied by Assoc. Prof. Dr. Carmen Ginghina, after a public competition. In October 2003 Prof. Dr. E. Apetrei retires and Prof. Dr. C. Macarie becomes the head of Fundeni cardiology Clinic. After 1 year, elections are organized in order to choose the heads of clinics for the entire University of Medicine and Pharmacy and Prof. Dr. Carmen Ginghina is elected as head of the Fundeni cardiology clinic and is currently running in this position. During this time the clinic continued to be involved in numerous activities. The clinic's activity with 4th year students was continued, as well as courses for residents in the 3rd year. Residents from the CC Iliescu Cardiology clinic and from Cardiology clinics all around the country participate at these courses. Training course for trans-thoracic and trans-esophageal ultrasound, vascular Doppler and interventional cardiology are organized twice a year. A total of 14 courses are organized in the clinic each year, excepting the courses for students and residents. Prof. Dr. Carmen Ginghina is very active from a professional and scientific point of view and she stimulated her colleagues and residents to take an active interest in research and publishing quality papers. The residents, under the direct guidance of the head of the the clinic help publish a yearly volume entitled "Cardiac patients Imagistics", continuing with a modern approach the series "Commented and Illustrated cases in Cardiology". Several books and monographies were published (see **Annex**). The level of scientific activity is very high, an important role in this aspect being held by the Cardiac Ultrasound Laboratory, with a European accreditation. Over 200 ISI credited publications were published in the last 10 years. Some of the members of the clinic are part of the boards of the national scientific organizations such as the Romanian Society of Cardiology and the Society's work Groups (see the volume The Romanian Society of Cardiology - short history - no. 56, **Annex I**) and in the European Society of Cardiology and Echocardiography. The current leadership of the clinic has also kept in mind the future, supporting and promoting young doctors. Today, the members of the CC Iliescu Cardiology clinic are: Prof. Dr. Carmen Ginghina - head of clinic, Prof. Dr. C Macarie, Assoc. Prof. Dr. Ion Coman, Assoc. Prof. Bogdan Popescu, Dr. R. Ciudin lecturer, Dr. Ioana Stoian lecturer, Adrian Mereuta lecturer, Dr. Ruxandra Jurcut lecturer, Dr. Andrei Carp

- Assistant Professor, Monica Rotareasa - Assistant Professor, Matei Costel - Assistant Professor, Dr. Cosmin Calin - Assistant Professor, Carmen Beladan - Assistant Professor, Ioana Savu Ionita - Assistant Professor, Mona Musteata - Assistant Professor. There also a research center with permanent employees - Dr. Andreia Calin, Dr. Monica Rosca. Prof. Dr. E. Apetrei is still responsible of doctoral students. Trainings abroad and in Romania of young cardiologists made possible the consolidation of a powerful clinic in terms of research, especially in echocardiography, but not limited to this field. Together with the other Cardiology clinics in the country, the CC Iliescu clinic goes to great lengths to train students, residents in cardiology and specialists in the different branches of cardiology. Medical research is also one of the strong points of the CC Iliescu Cardiology clinic.

ANNEX

Book, treaties, monographies

Written by the members of the Cardiology Clinic

1. *De vorba cu studentii. Notiuni de fiziologie, fiziopatologie, semiologie, patologie si terapeutica cardiaca* editia I-a editii). CC Iliescu Editura Cartea de aur. Bucuresti 1939; 450 pagini
2. *De vorba cu studentii. Notiuni de fiziologie, patologie si terapeutica cardiaca* editia II-a. CC Iliescu Editura Cartea de aur. Bucuresti 1943; 489 pagini
3. *Endocardita lenta*. CC Iliescu. Sub red Editura de stat pentru literatura stiintifica. Bucuresti 1953
4. *Electrocardiografia. I. Lobel* Editura Medicala Bucuresti 1956; 575 pagini
5. *Sindromul de ischemie periferica*. C.C. Iliescu sub red Editura Medicala Bucuresti 1956; 457 pagini
6. *Stenoza Mitrala. Clinica fiziopatologica*. Vintila V. Mihailescu, Elena Malitchi Editura Medicala. Bucuresti 1956; 162 pagini
7. *Cordul pulmonar cronic*. Vintila V. Mihailescu Editura Medicala Bucuresti 1958; 164 pagini
8. *Sindroamele coronariene*. C.C. Iliescu, Laurian Roman Editura Medicala Bucuresti 1960; 223 pagini
9. *Probleme de patologie cardiovasculara*. L. Kleinerman; F M. Ghita; Olga Dumitrescu, Sabina Leca Ministerul Sanatatii, ASCAR. Bucuresti 1964; 460 pagini
10. *Indreptar de diagnostic si tratament in bolile cardiovasculare*. C.C. Iliescu, Elena Malitchi, Dinu Draghici C.C. Editura Medicala, Bucuresti 1966.
11. *Hipertensiunea arteriala*. Vintila V. Mihailescu Editura Medicala Bucuresti 1966; 245 pagini
12. *Cardiopatiile ischemice coronariene. Clinica, diagnostic si tratament*. L. Kleinerman (red.), Hortensia Cionca, M. Ghita, M. Efraim Editura Medicala Bucuresti. 1966; 248 pagini
13. *Cardiopatiile ischemice coronariene. Clinica, diagnostic si tratament*. Editia a II a Kleinerman (red.), Hortensia Cionca, M. Ghita, M. Efraim L. Editura Medicala Bucuresti. 1973; 381 pagini
14. *Miocardopatiile cornice*. Vintila Mihailescu, Liliana Hagi Paraschiv-Dosius, Petronela Vintila. Editura Medicala Bucuresti 1973
15. *Actualitati in diagnosticul si tratamentul bolilor de inima*. V. Cunescu, D. Draghici Editura Medicala Bucuresti 1974; 228 pagini
16. *Actualitati in diagnosticul si tratamentul bolilor de inima*. V. Cunescu, D. Draghici Editura Medicala Bucuresti 1976; 382 pagini
17. *Mecanofonocardiografia*. Eduard Apetrei, E. Viciu Editura Medicala, Bucuresti, 1977; 164 pagini
18. *Terapia intensiva in cardiologie*. 2 editii Sub redactia Petronela Vintila Editura Medicala Bucuresti 1979, 1981; 336 pagini
19. *Arteriopatii periferice*. E. Viciu, Eduard Apetrei. Editura Medicala, Bucuresti, 1979; 455 pagini
20. *Cardiopatia ischemica*. L. Kleinerman (red.), Eduard Apetrei, Hortensia Cionca, Liliana Dosius, Marcel Efraim. Editura Medicala, Bucuresti, 1981; 431 pagini
21. *Bolile cardiovasculare. Calauza practicianului*. Vintila V. Mihailescu Editura Medicala 1981; 237 pagini
22. *Insuficienta cardiaca. Mecanisme. Evaluare. Tratament*. Cezar Macarie, Dan-Dominic Ionescu. Editura Militara. Bucuresti 1982; 310 pagini
23. *Indreptar de diagnostic si tratament al bolilor cardiovasculare Cositin Carp (sub red.)* Editura Medicala Bucuresti 1985; 456 pagini
24. *Ecocardiografie*. E. Apetrei. ISBN: 973-39 005-1, Editura Medicala, Bucuresti, 1990; 286 pagini
25. *Actualitati in cardiologie*. L. Gherasim. Eduard Apetrei. ISBN: 973-9397-007. Editura Amaltea Bucuresti, 1998; 592 pagini
26. *Clasificari si unele ghiduri practice in bolile cardiovasculare*. Eduard Apetrei, Ileana Arsenescu. ISBN: 973-9394-19-1, Bucuresti - Editura Info-Medica. Bucuresti, 1999; 180 pagini
27. *Boli congenitale*, Carmen Ginghina, Eduard Apetrei, C. Macarie. ISBN: 973-96286-9-4, Editura Amaltea, Bucuresti, 2001
28. *Clasificari si unele ghiduri practice in bolile cardiovasculare*, Eduard Apetrei, Ileana Arsenescu. Editia

- a II-a, Bucuresti. ISBN: 973-9394-63-9 Editura Info-Medica, Bucuresti, 2001; 210 pagini
29. *Cordul diabetic*. Carmen Ginghina, Gheorghe S. Bacanu, Mirela Marinescu, Dinu Dragomir. Editura Info Medica Bucuresti 2001. ISBN: 973-9394-57-4 144 pagini
30. *Insuficienta cardiaca*. Cezar Macarie, Eduard Apetrei, Carmen Ginghina. Editura Amaltea, Bucuresti, 2001; 211 pagini
31. *111 teste grila comentate pentru rezidentiat. Specialitati medicale si chirurgicale*. Ruxandra Ciobanu, Ilinca Gussi, Ciprian Jurcut, Silviu Stanciu. Ed. Medicala, Bucuresti, 2001
32. *Electrocardiografia*. Eduard Apetrei, Ioana Stoian. Editura Info-Medica, Bucuresti, 2002; 327 pg. *Carte premiata de Academia Romana (2003)*
33. *Ecocardiografie in imagini*. Eduard Apetrei, B.A. Popescu CD si volum, Ed. INSEI Print, Bucuresti, 2002
34. *Cardiologie (Cazuri comentate si ilustrate), vol. I*. Eduard Apetrei, Carmen Ginghina, C. Macarie. Editura Info-Medica, Bucuresti, 2002; 167 pagini
35. *Indreptar de diagnostic si tratament in Infarctul miocardic acut*. Carmen Ginghina, Mirela Marinescu, Dinu Dragomir. Ed. Info medica 2002. ISBN: 973-9394-73-6; 363 pagini
36. *Pericardiologia – de la diagnostic la tratament*. Carmen Ginghina, Dinu Dragomir, Mirela Marinescu. Ed. InfoMedica 2002. ISBN: 973-9393-88-4; 283 pagini
37. *Tratat de cardiologie. Volumul I*. Costin Carp. Editura Medicala Nationala Bucuresti. 2002. ISBN 9783-8194-65-2; 1161 pagini
38. *Tratat de cardiologie. Volumul II*. Costin Carp. Editura Medicala Nationala Bucuresti 2003. ISBN 973-8194-82-2, 1174 pagini
39. *Cardiologie (Cazuri comentate si ilustrate), vol. II*. Eduard Apetrei. Editura Stiintifica si Tehnica, Bucuresti, 2003; 187 pagini
40. *Diagnosticul modern al disectiei de aorta*. Ioan Coman. Ed. BIC All, 2003. ISBN: 973-571-471-x; 95 pagini
41. *Aritmiile cardiace la copil si adultul tanar*. Radu Ciudin, Carmen Ginghina, Ioana Ghiorghiu. Editura Info medica Bucuresti 2003; ISBN: 973-7912-16-0; 419 pagini
42. *Cardiologie (Cazuri comentate si ilustrate), vol. III*. Eduard Apetrei. Editura Info-Medica, Bucuresti, 2004; 253 pagini
43. *Evaluarea ultrasonografica vasculara*. Compact disc. Eduard Apetrei, Ileana Arsenescu. Editura INSEI, Bucuresti; 2004
44. *Cardiologie, cazuri comentate si ilustrate, vol.IV*. Eduard Apetrei, Carmen Ginghina. Editura Pro Bucuresti, 2004; 275 pagini.
45. *Insuficienta cardiaca - de la studii clinice la ghiduri*. Cezar Macarie, Ovidiu Chioncel. Editura Medicala, Bucuresti; 2005
46. *Esențialul în ecocardiografie*. Ginghină C, Popescu BA, Jurcut R. Editura Medicală Antaeus, București, 2005
47. *Hipertensiunea pulmonara in practica de cardiologie*. Carmen Ginghina. Ed. Academiei Romane, 2006
48. *Velocity Vector Imaging technology. A new tool for myocardial function evaluation - technique and clinical cases*. Ruxandra Jurcut. Editura Medicala Antaeus, Bucuresti, 2007. ISBN: 978-973-88434-6-2
49. *Insuficienta cardiaca acuta-abordare practica*. Cezar Macarie Ovidiu Chioncel. Editura ErcPress, Bucuresti, 2008
50. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol III. Sub redactia Carmen Ginghina*. Editura Medicala. Bucuresti, 2008. ISBN: 978-973-39-0681-0; 95 pagini.
51. *Insuficienta cardiaca acuta - Ghid pentru pacienti*. Cezar Macarie, Ovidiu Chioncel. Editura Medicala. Bucuresti, 2008
52. *Enciclopedia Medicala Romaneasca De la origini pana in prezent*. Ursea N., (sub redactia), Anghelescu N, Antonescu D. Apetrei E. Editura Universitara Carol Davila, Bucurest. ISBN: 978-973-708-331-9. 2009; 5 volume
53. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol V. Sub redactia Carmen Ginghina*. Editura Medicala. Bucuresti, 2009
54. *Mic tratat de Cardiologie*. Carmen Ginghina. Ed. Academiei Romane, 2010. ISBN: 978-973-27-1931-2; 894 pagini
55. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol V. Sub redactia Carmen Ginghina*. Editura Medicala. Bucuresti, 2010. ISBN: 978-973-39-0699-5; 124 pagini
56. *Societatea Romana de Cardiologie. Scurta istorie*. E. Apetrei. Media Med Publicis. Bucuresti, 2011.
57. *Ecocardiografia Doppler. (Tratat însoțit de DVD)*. Popescu BA, Ginghină C. Editura Medicală, București, 2011
58. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol V. Sub redactia Carmen Ginghina*. Editura Medicala. Bucuresti, 2011. ISBN: 978-973-39-0717-6; 129 pagini. ISBN: 978-973-39-0717-6; 129 pagini

59. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol V. Sub redactia Carmen Ginghina.* Editura Medicala. Bucuresti, 2011. ISBN: 978-973-39-07 17-6; 129 pagini
60. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol V. Sub redactia Carmen Ginghina.* Editura Medicala. Bucuresti, 2012. ISBN: 978-973-39-0735-0; 142 pagini
61. *Cateterismul cardiac pentru clinician. Dan Deleanu, Carmen Ginghina.* Editura Medicala Antaeus, Bucuresti, 2012. ISBN: 978-6068470-01-6; 394 pagini. *Carte premiata de Academia de Stiinte Medicale (2013)*
62. *Esențialul în ecocardiografie. Editia a doua, revizuita si adaugita. Ginghină C, Popescu BA, Jurcuț R.* Editura Medicală Antaeus, București, 2013; 383 pagini
63. *Imagistica la bolnavii cardiaci. Din pagina cartii la ecranul computerului. Vol VII. Sub redactia Carmen Ginghina.* Editura Medicala. Bucuresti, 2013. ISBN: 978-973-39-0749-7; 124 pagini

This list does not include chapters written in other books and monographies. The list of ISI articles will be published later.