Q: Dr. Maggiore, you are considered a prominent expert in the field of endodontics, what is the state of endodontics today?

A: Endodontics is a very solid discipline and represents one of the most fascinating specialties in modern dentistry. The technological and scientific achievements of the past decades have been enormous. For years, the goal of the specialty has been to raise the bar of endodontics, that is the standard of the routine root canal therapy performed by both general dentists and endodontic specialists. Probably now we are confident in saying that the bar has been raised and many endodontic treatments once considered challenging are actually properly managed by specialists and by well-trained general dentists.

Q: What have the major advancements in endodontics been? You mentioned technological and scientific achievements.

A: Yes, not only has technology advanced, but science has too. Electronic apex locators, operating microscopes, nickel-titanium rotary instruments, warm gutta-percha filling techniques, CBCT and bioceramic materials are only some of the technological innovations that have drastically changed the way endodontics is practiced today compared with a few years ago. In the past, practitioners had to rely on their tactile sense when exploring the pulp chamber of a tooth or when trying to detect the apical constriction. It was the era of what I call “tactile endodontics”—everything relied on fingers. Nowadays, under proper magnification provided by the operating microscope, we can clearly see the exact number and location of root canals, and using an apex locator, we can precisely detect the apical constriction. With the right skills and training, the use of the operating microscope allows the operator to have each step of the procedure under visual control. This can be accomplished by microscope users, both endodontic specialists and general dentists alike. This is what I term “visual endodontics.”

The scientific advancements are many, including the knowledge of the anatomical variation of each tooth and the histological response of the human body to different materials or biomaterials used in endodontics. Scientific advancement is the understanding of why, when and how an endodontic file breaks and eventually how to prevent separation. Scientific advancement is also the awareness that we are dealing with a sophisticated biofilm complex rather than with single bacterial species. This has given rise to the prominent role of irrigation protocols and modalities in everyday practice.

Q: What are the differences between general dentists and endodontic specialists in performing endodontic treatment?
The scientific advancements are many and include knowledge of the anatomical variation of each tooth, the histological response of the human body to different materials, and the biomaterials used in endodontics.

A: There are many differences and probably different commitments. A general dentist has to provide the full range of treatments for his or her patients, including endodontic treatment. This is a considerable task. In the U.S., the majority of root canal therapies are actually performed by general dentists and this is probably true everywhere around the globe.

General dentists should be confident in providing primary endodontic therapy, that is, conventional endodontics. They should take advantage of the technological innovations in endodontics and use them to their best ability. They should also be aware of what can be achieved in the hands of a specialist, that certain treatments are feasible, that many endodontically compromised teeth can still be saved and have a good long-term prognosis.

Endodontic specialists complete advanced education in endodontics through a postgraduate program. Generally, they limit their practice to endodontics. They provide conventional endodontic treatment, but mainly treat challenging cases of complex anatomy, multirooted teeth, traumatized teeth, endodontic retreatments and endodontic microsurgery.

Many patients would like to retain their natural dentition for as long as possible. Endodontic specialists can provide a wide range of treatments in many cases. Communication between general dentists and endodontists is very important for successful patient management. In this regard, case selection is a key factor for a general dentist. In fact, many general dentists know that, in certain clinical situations, the best service they can provide to their patients is to refer them to the specialist. A cautious general dentist knows also when the case has to be referred, before it is too late, that is, before a perforation occurs or before an instrument separation ruins his day. Even in these challenging situations, however, very often, a specialist can still save the tooth. This is probably one of the commitments of an endodontic specialist, to shift the prognosis of an endodontically compromised tooth.

Q: What is the aim of your course in the Clinical Masters™ Program in Endodontics?
A: The purpose of the course is to share with participants our clinical experience and knowledge. Most of my everyday clinical work focuses on retreatments, non-surgical and surgical. Over the years, we have identified which instrument or approach works best in the particular clinical situation. Participants will be guided through treating complex clinical cases and learning new technologies, materials and techniques step by step, keeping in mind the philosophy of a safe and efficient approach.

Thank you very much for the interview.