

Latin American Radiologists Harness the Power of Collaboration

Editor's note: This is the second installment in a two-part RSNA News series focusing on the regions featured in "Presents" sessions at RSNA 2010. A story about China's radiology climate appeared in the August 2010 issue.

The future of Latin American radiology looks bright, thanks to economic growth throughout much of the region and the power of collaboration.

RSNA 2010 attendees can learn about these developments during "Latin America Presents," scheduled for Tuesday, November 30, 10:30 a.m.–12:00 p.m. The session will begin with an overview of Latin American radiology, exploring collaborations with RSNA and the role of imaging in diseases endemic to the region and conclude with presentations of Latin American radiologic innovations currently being developed. (see sidebar).

"This is a great opportunity to learn about Latin American radiology research and clinical and educational activities, as well the region's evolving relationship with RSNA," said Ricardo Garcia Monaco, M.D., a past-president of the Interamerican College of Radiology (CIR). Dr. Garcia Monaco is a member of the RSNA International Advisory Committee and participates in the annual international trends roundtable during the RSNA annual meeting.

"Latin America is vast, diverse and unique—the future of the region looks both exciting and challenging," said 2010 RSNA President Hedvig Hricak, M.D., Ph.D, Dr. h.c. "Building on their significant historic and ongoing contributions to the field, Latin American radiologists are ensuring that regional growth translates into increasing investment in major public health issues, including training of healthcare professionals and implementation of cost-effective technologies. I am delighted that the RSNA 2010 annual meeting is honoring the achievements of Latin American radiologists."

Economic Forecasts are Positive

While much of Latin America has been wracked by economic stress in recent years, there is cause for optimism. The *New York Times* reported on June 30 that strong demand in Asia for iron ore, tin, gold and other commodities, combined with deficit-controlling, inflation-lowering policies in several Latin American economies, is fueling regional growth at what the World Bank predicts will be a 4.5 percent rate this year.

With this modest economic boom radiologists anticipate being able to afford the advanced technology they need to provide optimal care.

"Radiology is so influenced by technology and with such

Latin America Boasts Diverse Radiologic Innovations

As radiologists in Latin America look to the future, they are also proud of the contributions the region already has made to the specialty:

Brazil

- Home to Latin America's very first documented radiologic equipment—an X-ray machine—in 1897
- Abreugraphy, used to screen for occupational diseases and tuberculosis

Chile

- Anatomic and radiologic studies of the fourth ventricle (Mario Corrales, M.D.)
- Radiologic diagnosis of congenital hip dysplasia (Armando Doberti, M.D.)

Argentina

- Operative cholangiography (Pablo Mirizi, M.D.)
- Hysterosalpingography with lipiodol (Carlos Heuser, M.D.)
- Iodoventriculography (Manuel Balado, M.D.)

"Latin America" Presents—A Journey through Latin-American Radiology: Past, Present and Future

Tuesday, Nov. 30, 10:30 a.m.–12:00 p.m.

- Latin America-RSNA collaborations: Back to the Future
- Endemic diseases in Latin America: Role of Imaging
- Radiology in Latin America: Contributions to Imaging Science
- Innovations in imaging originating in Latin America: Works in Progress

- TI-RADS: An US classification of thyroid nodules related to cancer risk (Chile)
- Virtual MDCT Pneumoesophagosc opy (Argentina)
- Virtual MDCT Hysteroscopy (Argentina)

tremendous advances in recent years, there is a need for updates that are affordable only with a rational economy," Dr. Garcia Monaco noted.

- Embolization of Prostatic Adenoma (Brazil)
- Angiomovil (Brazil)
- Functional MR to replace Wada Test in epilepsy (Dominican Republic)

Endemic Diseases, Natural Disasters are Challenges

Defined as a region of the Americas where romance languages are spoken, Latin America comprises 20 countries (see info boxes) with significant geographic, economic, demographic and climatic differences.

While most Latin American physicians deal frequently with illnesses familiar to their U.S. colleagues, such as cancers and cardiovascular disease, some are also managing patients with endemic vector-borne diseases like dengue and malaria as well as tuberculosis and measles. Acute diarrheal and respiratory infections pose a significant threat in some countries.

"Embracing cultural diversity and sharing experiences and resources may be the key to dealing with some of the common health threats in the region," Dr. Hricak said.

Natural disasters are also an economic and health strain—Hurricane Mitch caused more than 19,000 deaths and \$6 billion in damage in the Atlantic basin in 1998 while Hurricane Wilma just seven years later caused fewer than 40 deaths but \$29 billion in damage.

"This is a good example of the gaps between the more- and less-developed areas of Latin America, with diseases distributed in direct relationship with local health policies and economies," Dr. Garcia Monaco said.

Equipment, Staffing Levels Vary

Ultrasound and X-ray are the most common types of radiology equipment in the region, while some countries also have CT and MR. Some countries are incorporating digital images, RIS and PACS and teleradiology systems, with private clinics being more likely than public clinics to have sophisticated equipment.

"In Latin America, there are typically big economic gaps among different geographical areas even within the same countries," Dr. Garcia Monaco said. "For example, Buenos Aires (Argentina) and Santiago (Chile) have high-tech facilities, as opposed to rural zones or peripheral cities, which have no MR machines or even CT scanners. In most countries, the high-tech facilities are mainly in private institutions or university hospitals and not so much in public institutions."

Radiologist shortages exist. Nicaragua, a nation of six million people, once had fewer than two dozen radiologists—this after the country was devastated by multiple hurricanes and an earthquake and less than three-quarters of its hospital-based radiology equipment was working.

Collaboration Gives Disparate Countries Power in Numbers

Latin American radiologists are finding solutions to workforce shortages, equipment inequities and training gaps as they renew

their commitment to collaboration.

CIR brought together Latin American radiologists for the first Interamerican Congress of Radiology in Buenos Aires in 1943. By the 1980s, however, the organization had dwindled in numbers and held only occasional congresses. On the eve of its 50th anniversary, facing new challenges in clinical practice and education, CIR experienced a renaissance. Commissions now focus on education, publications, international relationships, awards, statutes and regulations and ethics and the organization promotes biannual congresses with a greater number of invited professors and scientific presentations. The next meeting is October 29–31, 2010, in Santiago.

"CIR grew tremendously in the last decade, due to better organization and management encouraging teamwork among Latin American countries, with a focus on education," Dr. Garcia Monaco said. "The first Virtual Congress in Spanish gave all Latin American radiologists the opportunity to learn from renowned faculty, something previously possible for just a few who could travel long distances to attend an international congress."

In 1988 CIR established an annual visiting professor program enabling staff from more advanced countries to reach out to others in need. To further aid with training, the organization created several years ago a permanent education portal, radiologiavirtual.org, including refresher courses, interactive clinical cases and a resident program.

Continuing Education Key to Successful Future

The success of Latin American radiology rides on this collaboration, along with equipment availability and access to continuing education—something in which RSNA plays a significant role, Dr. Garcia Monaco said.

"The 'Latin America Presents' session is an excellent example of the RSNA's international outreach and willingness to improve healthcare by means of radiology worldwide," he said.

Argentina

- Population: 40.1 million
- Capital and largest city: Buenos Aires (3.1 million)
- RSNA members : 159
- RSNA annual meeting attendance : 437

Bolivia

- Population: 9.8 million
- Capital: La Paz (835,000)
- Largest city: Santa Cruz de la Sierra (1.5 million)
- RSNA members: 5
- RSNA annual meeting attendance: 13

Brazil

- Population: 192.3 million

- Capital: Brasilia (2.6 million)
- Largest city: São Paulo (11 million)
- RSNA members: 697
- RSNA annual meeting attendance: 1,844

Chile

- Population: 17 million
- Capital and largest city: Santiago (5.3 million)
- RSNA members: 80
- RSNA annual meeting attendance: 269

Colombia

- Population: 44.5 million
- Capital and largest city: Bogotá (7.8 million)
- RSNA members: 114
- RSNA annual meeting attendance: 348

Costa Rica

- Population: 4.5 million
- Capital and largest city: San José (347,000)
- RSNA members: 27
- RSNA annual meeting attendance: 68

Cuba

- Population: 11.5 million
- Capital and largest city: Havana (2.17 million)
- RSNA members: 0
- RSNA annual meeting attendance: 2

Dominican Republic

- Population: 10.1 million
- Capital and largest city: Santo Domingo (3 million)
- RSNA members: 12
- RSNA annual meeting attendance: 51

Ecuador

- Population: 13.6 million
- Capital: Quito (1.5 million)
- Largest city: Guayaquil (2.1 million)
- RSNA members: 19
- RSNA annual meeting attendance: 66

El Salvador

- Population: 6.2 million
- Capital and largest city: San Salvador (11,600)
- RSNA members: 3
- RSNA annual meeting attendance: 22

Guatemala

- Population: 13.3 million
- Capital and largest city: Guatemala City (2.3 million)
- RSNA members: 17
- RSNA annual meeting attendance: 15

Honduras

- Population: 8 million
- Capital and largest city: Tegucigalpa (850,000)
- RSNA members: 10
- RSNA annual meeting attendance: 18

Mexico

- Population: 111.2 million
- Capital and largest city: Mexico City (8.8 million)
- RSNA members: 565
- RSNA annual meeting attendance: 1,363

Nicaragua

- Population: 6 million
- Capital and largest city: Managua (1.8 million)
- RSNA members: 4
- RSNA annual meeting attendance: 10

Panama

- Population: 3.4 million
- Capital and largest city: Panama City (813,000)
- RSNA members: 21
- RSNA annual meeting attendance: 112

Paraguay

- Population: 6.4 million
- Capital and largest city: Asunción (512,000)
- RSNA members: 3
- RSNA annual meeting attendance: 6

Peru

- Population: 29.9 million
- Capital and largest city: Lima (7.8 million)
- RSNA members: 42
- RSNA annual meeting attendance: 149

Puerto Rico

- Population: 4 million
- Capital and largest city: San Juan (434,000)
- RSNA members: 4
- RSNA annual meeting attendance: 7

Uruguay

- Population: 3.5 million
- Capital and largest city: Montevideo (1.3 million)
- RSNA members: 6
- RSNA annual meeting attendance: 45

Venezuela

- Population: 26.4 million
- Capital and largest city: Caracas (3.3 million)
- RSNA members: 42
- RSNA annual meeting attendance: 280

¹All populations are estimates based on latest information available.

²RSNA Membership numbers are as of December 2009.

³RSNA Annual Meeting Attendance numbers 2005–2009 total.

RSNA Honorees from Latin America

Gold Medal

1931 Carlos Heuser, M.D. (Buenos Aires, Argentina)
2000 Jose Luis Ramirez-Arias, M.D. (Mexico City)

Honorary Membership

1972 J. M. Sanchez-Perez, M.D., (Mexico City)
2000 Sidney de Souza Almeida, M.D. (Americana, Brazil)
2007 Francisco A. Arredondo, M.D. (Guatemala City)

Special Presidential Award

1996 José Luis Ramirez-Arias, M.D. (Mexico City)
1996 Miguel E. Stoopan, M.D. (Mexico City)