

# RSNA 3D PRINTING SPECIAL INTEREST GROUP (SIG)

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Frank J. Rybicki, MD, PhD  
SIG Founding and Past-Chair

# RSNA 3D PRINTING SIG

## Mission Statement:

To promote the highest quality 3D printing applied to medicine via education, collaboration, and research. The SIG will focus on maintaining a prominent role for radiologists in this diverse and growing specialty. The group will also seek to provide physicians and allied health scientists with optimized education and research programs.



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### 3D Printing Special Interest Group (SIG)

RSNA is proud to introduce its 3D Printing Special Interest Group (SIG) to its membership. 3D printing for patient care crosses all subspecialties. This is your opportunity to be on the cutting edge of innovative 3D printing specialty.

While you are planning your week at the RSNA 2016 Scientific Sessions, please make note of the following events.

**3D Printing SIG: An Introduction of the Roles and Responsibilities of this Innovative Team within the RSNA Family**  
Sunday, November 27  
10:30 - 11:00 AM  
Location: Discovery Theater, RSNA Connections Center

**3D Printing SIG Business Meeting (open to all meeting attendees)**  
Sunday, November 27  
1:00 - 3:00 PM  
Location: S104B

Come join us and learn more! If you have questions, please contact [3DSIG@rsna.org](mailto:3DSIG@rsna.org).

### Mission Statement

To promote the highest quality 3D printing applied to medicine via education and research, collaboration, and research. The



# RSNA 3D PRINTING SIG

Community:

<http://www.rsna.org/3D-Printing-SIG/>

3D Printing Special Interest Group Digest for Monday November 21, 2016 - Inbox

Message

Delete Reply Reply All Forward Move Junk Unread Categorize Follow Up

**3D Printing Special Interest Group Digest for Monday November 21, 2016**  
Radiological Society of North America  
Sent: Tuesday, November 22, 2016 at 1:34 AM  
To: Mitsouras, Dimitrios, Ph.D.

To protect your privacy, some pictures in this message were not downloaded. [Download pictures](#)

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**Nov 21, 2016**

started yesterday, [Nicole Wake](#) (1 reply)

[3D printing workflow](#) [external link to thread view](#)

1. [Would this be similar to the NIH print exchange?...](#) Jesse Courtier

1. [Re: 3D printing workflow](#)

[Reply to Group](#) [Reply to Sender](#)

Nov 21, 2016 12:22 AM  
[Jesse Courtier](#)

# RSNA 3D PRINTING SIG

## Membership:

All SIG members are members of RSNA.

\$40USD dues for SIG are separate from RNSA membership fees

## Meetings:

SIG meetings, including the meeting today, will be held under the auspices of RSNA.

## Committees:

Guidelines committee, led by Adnan Sheikh, MD

# 1<sup>ST</sup> SIG DOCUMENT

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Radiological Society of North America (RSNA), 3D  
Printing Special Interest Group (SIG) - Consensus  
Recommendations for 3D Printing from Medical Images

# CONSENSUS RECOMMENDATIONS

Draft uploaded to SIG website for writing and review

Harmonization of all comments before SIG meeting March 2017

Vetting, re-writing, voting on March 4, 2017 (SIG Scottsdale)

Document approval from RSNA Board

Submission to *Radiology*

# PURPOSE

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One principal goal for the organization, and the purpose of this document, is to provide guidance towards consistent and safe use of 3D printing from medical images in a healthcare facility.

# DOCUMENT PARTS

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Medical Image Acquisition and Interpretation  
Image Data Preparation and Manipulation  
Generation of Physical 3D Printed Model



# MEDICAL IMAGE ACQUISITION AND INTERPRETATION

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1. Spatial resolution and voxels
2. SNR/ CNR
3. Artifacts
4. Image interpretation

# IMAGE DATA PREPARATION AND MANIPULATION

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1. File formats
2. Major versus minor alterations
3. Post-processing and safety
4. Quality Control

# GENERATION OF PHYSICAL 3D MODEL

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1. Patient identifier
2. Support materials
3. Cleaning & inspection
4. Delivery to referring physicians
5. Biocompatibility and sterilization

