

## Simple and low-cost tele-nuclear medicine conference system with the e-mail protocol

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**Purpose:** Because of the recent innovative growth in computer technology, digital imaging, and the Internet, we can take advantage of these facilities for education and clinical work in nuclear medicine. We developed a tele-nuclear medicine conference system with electronic mail (e-mail) on the Internet. **Methods:** Twenty-one physicians (20 radiologists, 1 neurologist), 6 technologists and 2 medical students in six university hospitals (Japan 5, Canada 1), 5 local hospitals in Japan participated in this project. We used digital still cameras (330 k pixels) equipped with a floppy disk drive and 10 × optical zoom to digitize images with JPEG compression (640 × 480 matrix). The images were attached to e-mail messages (containing a brief description of each case). The mail was sent simultaneously to all members on the mailing list. Scintigram and SPECT images as well as other radiological images were sent by e-mail. Reply mails about each case were sent to all members via the mailing list. **Results:** During a period of 6 months, 18 cases (tumor/infection: 7, bone: 6, cardiovascular: 1, neurology: 3, endocrine: 1) with 144 e-mails (average 5.6/case) were submitted to the conference. The average period of discussion was 15.6 days. The number of attached images was 1 to 9 (average, 4.2/e-mails). JPEG compression rate was 1/10 to 1/20. The quality of the images was good enough for discussion. Some cases required additional images for further discussion. **Conclusion:** Our tele-nuclear medicine conference with an electronic mailing list and digital camera was simple and low-cost. The conference system was useful for education and clinical work.

**Key words:** Internet, e-mail, mailing list, tele-nuclear medicine