IRPA9
1996 International Congress on
Radiation Protection
April 14-19,1996
Vienna, Austria

FORM FOR SUBMISSION OF ABSTRACTS
(Instructions for preparation on reverse)

FOR OFFICIAL USE ONLY
Abstract No.
Receipt
Author
Acceptance
Mini-Presentation

PAPER TITLE X-RAY DIAGNOSTICS: DOSE TO PATIENTS VERSUS TECHNICAL EXPOSURE PARAMETERS

AUTHOR(S) NAME(S) Maria Anna Staniszewska

SUBMITTING AUTHOR

LAST NAME STANISZEWSKA FIRST NAME Maria Anna TITLE Ph.D.

AFFILIATION Institute of Occupational Medicine TEL (42) 314-550

STREET Sw. Teresy 8 FAX 314-562

CODE 90-950 CITY Łódź COUNTRY POLAND

PRESENTING AUTHOR (IF DIFFERENT)

MAJOR SCIENTIFIC TOPIC NUMBER 6. (see page 7)

ABSTRACT (See instructions overleaf)

Doses to patients in X-ray examinations extremely depend on a choice of technical exposure parameters. Approximately the same visualization of anatomical details is possible to achieve using different combination of kilovoltage, charge (anode current and time product) and total filtration, but with quite different doses to patient. (Source -skin distance is designed by type of procedure.) In the newest X-ray units kilovoltage - charge combination is fixed automatically, but the older equipment needs to choice of these parameters "handly" - by technicians.

This paper presents results of evaluation how particular parameters can affect on dose to patients, taking into consideration the mode of X-ray generators. (Kilovoltage seems to be the most important from mathematical point of view.) As in Poland X-ray units with different rectifying system are in use, this analyse takes into account the following systems: half-wave, 6- and 12-rectifiers and constant potential generators. The influence of total filtration is significant as too low filtration was very frequently found error in Polish X-ray units.

As conclusion - a possibility of patient dose reduction is discussed versus an appropriate choice of X-ray equipment and their exposure parameters.