



# EORNA

EUROPEAN OPERATING ROOM  
NURSES ASSOCIATION

## 9th EORNA Congress

16-19 May 2019

The Hague, The Netherlands

CONGRESS ▾

SCIENTIFIC PROGRAMME & ABSTRACTS ▾

REGISTRATION & ACCOMMODATION ▾

PRACTICAL INFORMATION ▾

SPONSORS & EXHIBITORS ▾



# “ON THE MOVE”

9th EORNA Congress

The Hague, The Netherlands

16 - 19 May 2019



**EORNA**  
EUROPEAN OPERATING ROOM  
NURSES ASSOCIATION

**9th EORNA Congress**  
16-19 May 2019  
The Hague, The Netherlands

## **RELEVANT COMPLICATIONS OF SURGICAL SMOKING IN DOCTORS AND NURSES IN OPERATING ROOM CLINICS**

Rahşan ÇAM\*, Büşra ŞAHİN\*, Ezgi TEMEL\*.

\*Department of Surgical Nursing, Aydın Adnan Menderes University, AYDIN

# Adnan Menderes University Faculty of Nursing Surgical Nursing Department



Research Assistant  
Büşra ŞAHİN

[busratipirdamaz@gmail.com](mailto:busratipirdamaz@gmail.com)

Research Assistant  
Ezgi TEMEL

[e.temel@adu.edu.tr](mailto:e.temel@adu.edu.tr)

Assistant Proffesor  
Rahşan ÇAM

[rahcancam77@gmail.com](mailto:rahcancam77@gmail.com)

THE REAL RISKS

# SURGICAL SMOKE

The image features a stylized human torso in a dark, almost black, color. From the chest and upper abdominal area, wisps of white and light blue smoke or steam rise upwards. The background is filled with a dense field of small, glowing red and orange particles, resembling embers or dust, which adds a sense of heat and danger. The overall aesthetic is dramatic and high-contrast, emphasizing the hazardous nature of surgical smoke.

- Surgical smoke is a plume which is produced by tools that cut or cauterise tissue during surgical operations.



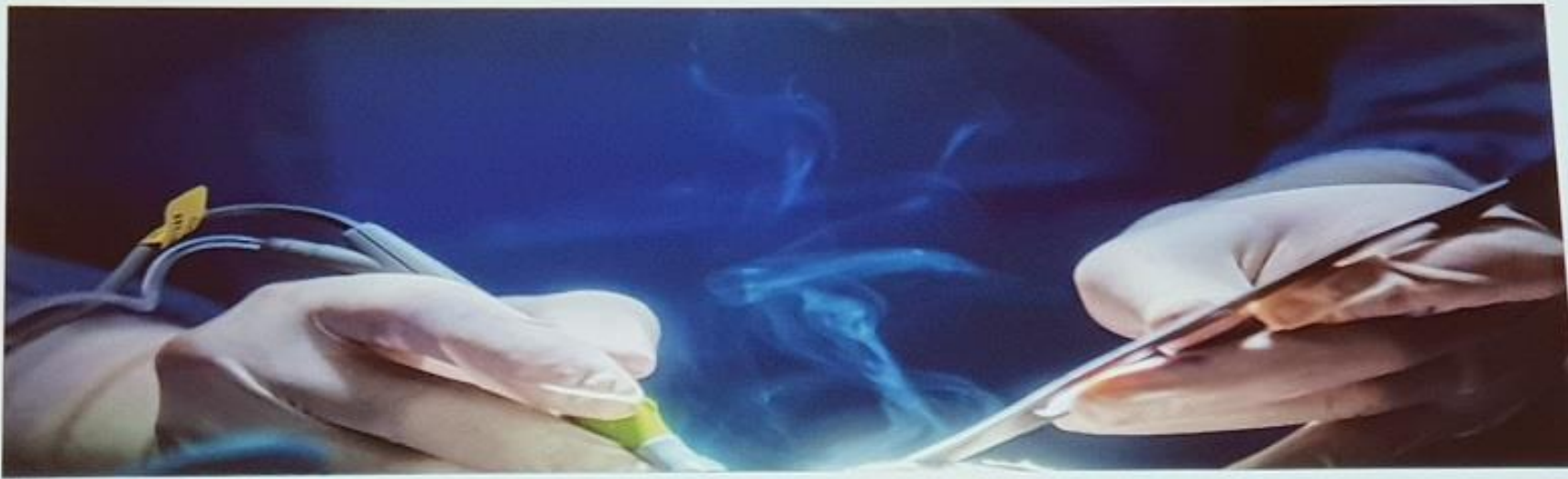
Fan JKM, Chan FSY & Chu KM (2009) Surgical smoke. *Asian Journal of Surgery* 32, 253–257.

- These surgical instruments include those used in electrocautery, lasers, ultrasonic scalpels, high speed drills, burrs and saws.





- All patients and health care workers are constantly exposed to the hazards of surgical smoke during the perioperative period.



- As reported by the **Occupational Health and Safety Administration (OSHA)** each year, approximately 500,000 workers, including surgeons, nurses, anaesthesiologists and surgical technologists are exposed to laser or electrosurgical smoke.



# AIM



- The purpose of the study is to examine the complications of surgical smoke in doctors and nurses working in the operating room.

## QUESTIONS OF STUDY

Q1: What are the complications which will see on surgical smoking in the operating doctors?

Q2: What are the complications which will see on surgical smoking in the operating nurses?

# METHODS

Descriptive Study

Working universe nurses  
and doctors to work in  
operating room

G-Power  
Analyses

Effect Size: Middle  
Level of error ( $\alpha$ )=0.05  
Power ( $1-\beta$ )=0.80

N=165  
n=65

## Suitable Criterias

- Those who agree to participate in the search
- Doctors and nurses working in Aydın Adnan Menderes University.

# Study Design



The study was carried out between **20.06.2018 - 20.07.2018**  
at the Adnan Menderes University Operating Room Clinic

# Data Collection

Between 08:00 and 16:00 on weekdays

Face to face interview method

10-15 minutes

## SOCIODEMOGRAPHIC CHARACTERS

The average age of the doctors and nurses participating in the study

31.79 ± 1.24 (min: 22, max: 53)

62.8% at the graduate level

62.8% male

9 years of professional working hours

mean age was 7 years

## TYPE OF UNITS

25.6% of these employees worked in urology

18.6% of them were in gynecology and obstetrics

11.6% in otolaryngology surgery and neurosurgery

9.3% in brain surgery and anesthesia

7% was the result of working in the vascular surgery unit



It was stated that **30.2%** of the doctors and nurses had cigarette use

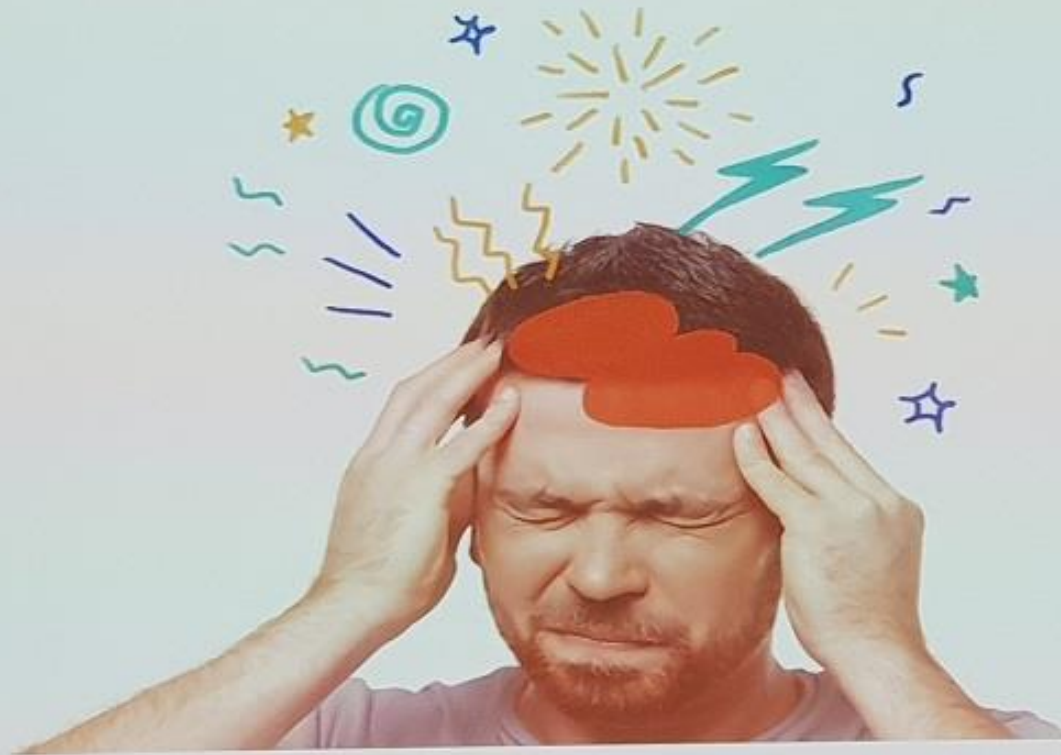
**79.1%** had no chronic disease

**23.3%** of surgical smokers had undergraduate and in-service education

**83.7%** were not educated about surgical smoke

# SYMPTOMS OF SURGICAL SMOKE

46.51% of them had headache



# SYMPTOMS OF SURGICAL SMOKE

7% of them were burning in the throat  
30.23% were irritable



# SYMPTOMS OF SURGICAL SMOKE

14% were cramp



# SYMPTOMS OF SURGICAL SMOKE

7% were nausea



# SYMPTOMS OF SURGICAL SMOKE

7% were rhinitis



# SYMPTOMS OF SURGICAL SMOKE

25.58% in eyesight



# SYMPTOMS OF SURGICAL SMOKE

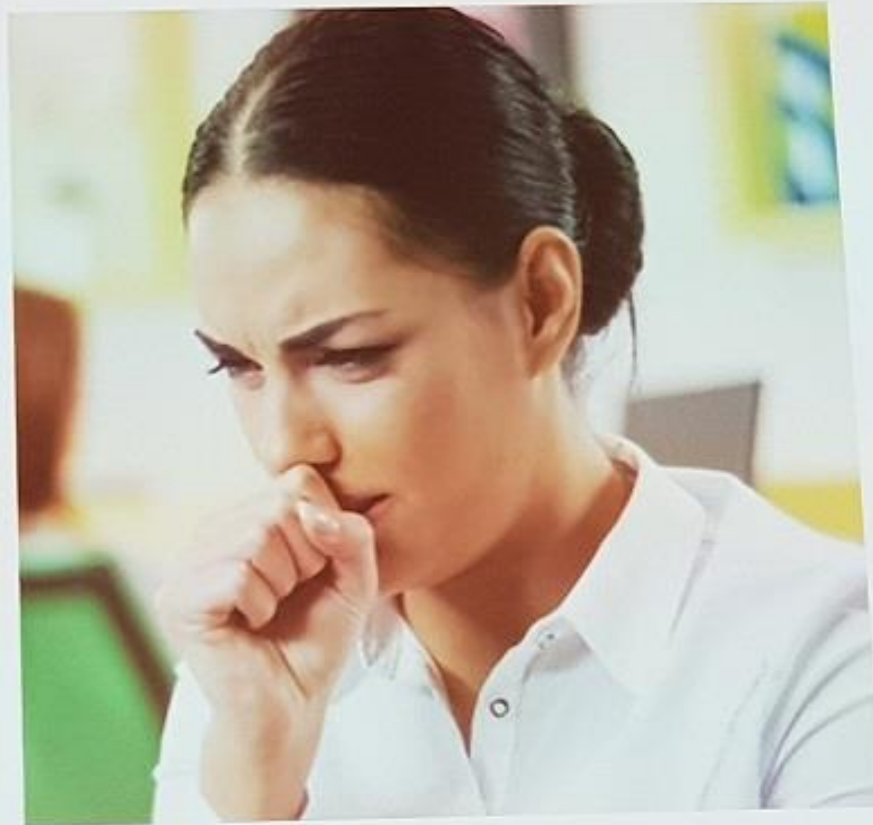
9.3% in myalgia





# SYMPTOMS OF SURGICAL SMOKE

11.62% in cough, respiratory problems and hair loss symptoms



## SYMPTOMS OF SURGICAL SMOKE

- The precautions related to surgical smoke, doctors and nurses working in the operating room stated that 67.44% of the patients were smoked with aspiration catheter.



76.74% were surgical masks



41.86% of aprons

16.27% of glasses were used.

41.86% of aprons and 16.27% of glasses were used.





That 83.7% of doctors and nurses thought that these measures for surgical drainage in the operating room were not enough.

# THE OTHER RESULTS OF RESEARCHES



## ORIGINAL ARTICLE

The examination of problems experienced by nurses and doctors associated with exposure to surgical smoke and the necessary precautions

Arzu Ilce, Ganime Esra Yuzden and Meryem Yavuz van Giersbergen

It was found that they did not report taking any effective protective measures, and only a few of the nurses reported using special filtration masks.

It was observed that the participants widely used surgical masks, which are ineffective in protecting from the effects of surgical smoke.



## **Secondhand Smoke in the Operating Room? Precautionary Practices Lacking for Surgical Smoke**

**Andrea L. Steege, PhD, MPH,\* James M. Boiano, MS, CIH, and Marie H. Sweeney, PhD, MPH**

Study findings can be used to raise awareness of the marginal use of exposure controls and impediments for their use.

## Health risks associated with exposure to surgical smoke for surgeons and operation room personnel

Kae Okoshi · Katsutoshi Kobayashi · Koichi Kinoshita ·  
Yasuko Tomizawa · Suguru Hasegawa ·  
Yoshiharu Sakai

- Surgeons should assess the potential dangers of surgical smoke and encourage the use of evacuation devices to minimize potential health hazards to both themselves and other OR personnel.



According to the results of the research, it is concluded that the measures related to surgical smoke in the operating room are inadequate and that measures regarding surgical smoke complications should be taken.



**"IF ONE DAY, MY WORDS  
ARE AGAINST SCIENCE,  
CHOOSE SCIENCE."**

**- MUSTAFA KEMAL ATATÜRK**