First Semester
Basics of Surgery

SURGICAL INFECTION

Sawa University — جامعـــــة ســـــــاوة الاهلية

College of health and medical techniques — كليـــــة التقنيـــات الصحيـة والطبيـة

Department of Anesthesia — قسم تقنيـــات التخديـــــر

Stage: Second — المرحلـــــــــــة: الثانية

محاضرة رقم: 3

Lecture No. 3

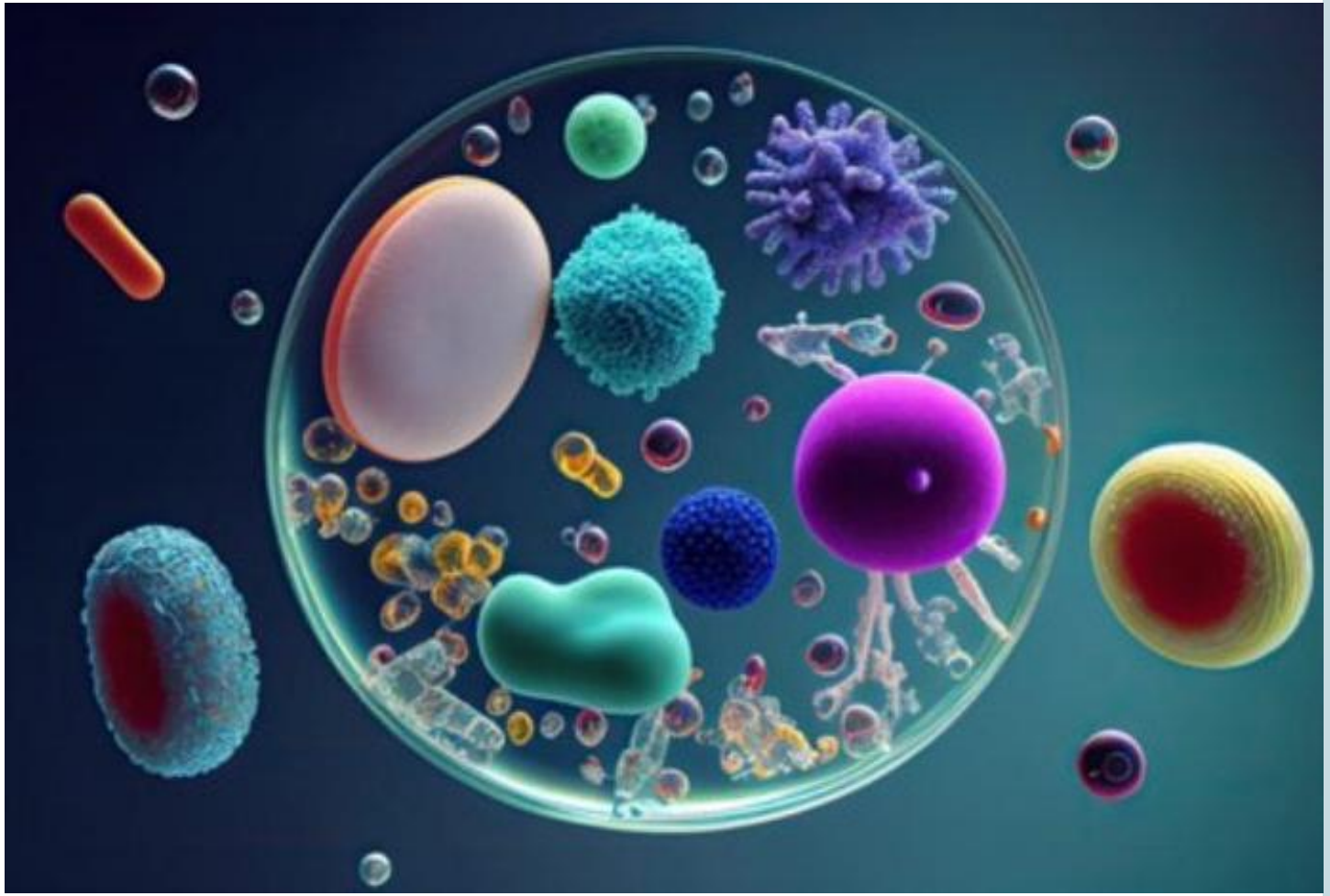
نظـــــــري

Theoretical

استاذ المادة : م.م. رباب سمير كاظم

INFECTION

IS THE PROCESS OF BACTERIA OR VIRUSES INVADING THE BODY OR MAKING SOMEONE ILL OR DISEASED **OR** ITS THE ENTRY AND MULTIPLICATION OF INFECTIOUS AGENT IN TISSUES OF HOST.



- Infection= (Microorganism+Inflammatory response)

TYPES OF INFLAMMATORY RESPONSE

A. Localized inflammatory response

- (redness, heat, swelling, pain)

B. Systemic inflammatory response syndrome SIRS

- Any Two of the Following Criteria

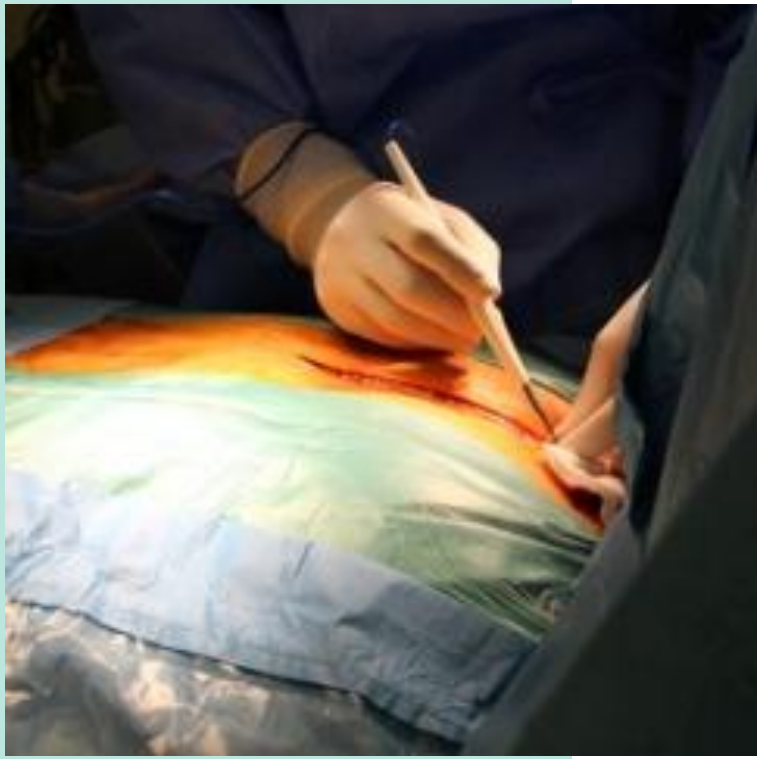
  Temperature: < 36.0, >38.0

  Heart Rate: >90

  Respiratory Rate: >20 breaths/min

  WBC: < 4,000, > 12,000

SURGICAL SITE INFECTION (SSI)



- ✓ **Its an infection** that **occurs in the wound** created by a **surgical procedure**.
- ✓ It **leads to**
  1. increased morbidity
  2. increased mortality
  3. Increased duration of hospital stay (7 days on an average)
  4. increased cost

TYPES OF SURGICAL SITE INFECTION

- **Superficial Incisional SSI**

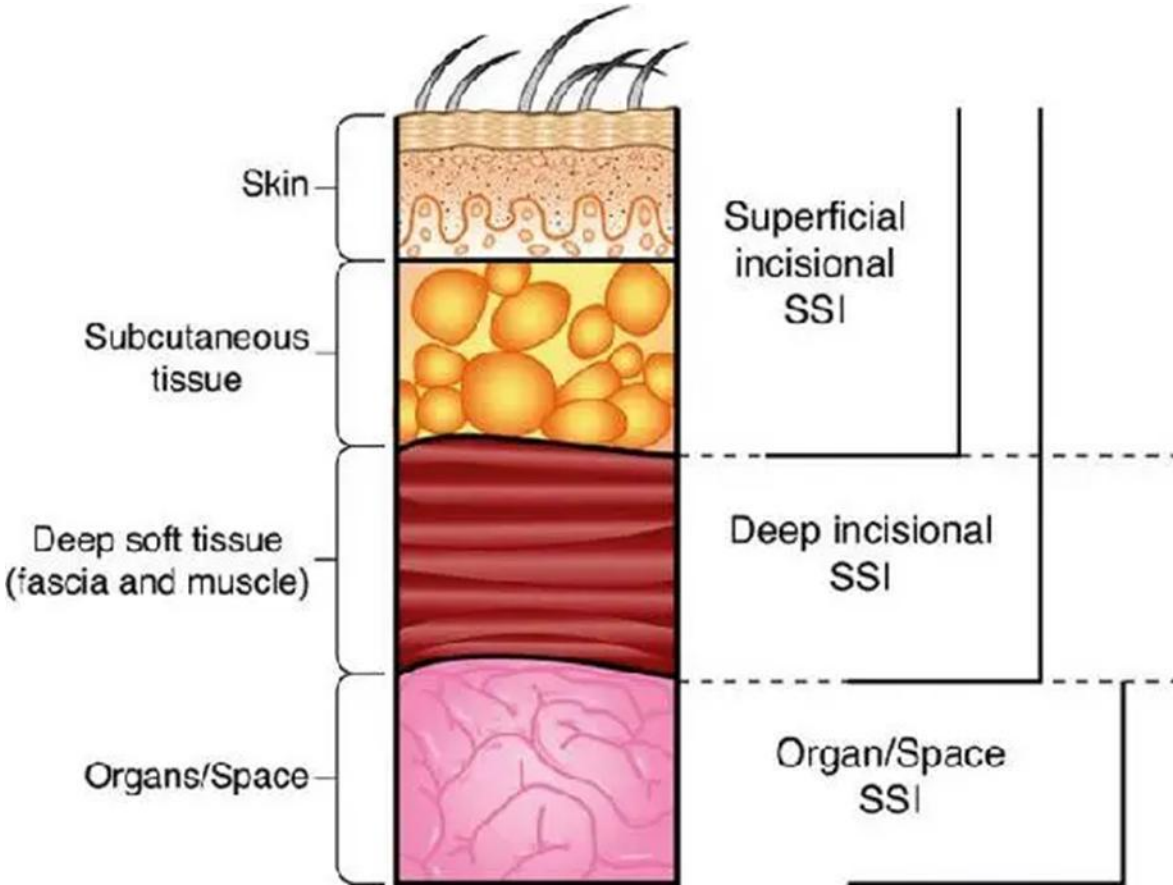
  Involves skin and subcutaneous tissue.

- **Deep Incisional SSI**

  Involves deep soft tissue i.e muscles & fascia.

- **Organ or space SSI**

  Involves any area of the body such as body organ or space between organs.



PATIENT FACTORS

- ✓ Older age
- ✓ Immunosuppression
- ✓ Obesity
- ✓ Diabetes mellitus
- ✓ Malnutrition
- ✓ Smoking
- ✓ Steroid use

PRE-OPERATIVE FACTORS

- ✓ Hair removal
- ✓ Poor skin preparation
- ✓ Inadequate antibiotic prophylaxis

SURGICAL FACTORS

- ✓ Contamination of instruments
- ✓ Prolonged procedure
- ✓ Hypoxia
- ✓ Wound closure

POST-OPERATIVE FACTORS

- ✓ Wound dressing
- ✓ Supplemental oxygen
- ✓ Antibiotics
- ✓ Keeping clean
- ✓ temperature

RISK FACTORS OF SSI

WOUND CLASSIFICATION

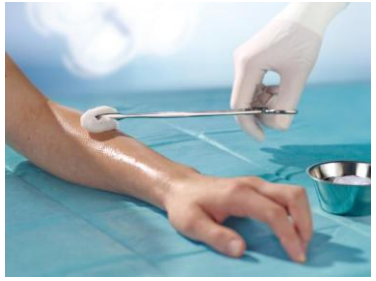
Wound category	characteristic
clean	Nontraumatic, primary closure, elective wound without drain; no break in aseptic technique; not infected or inflamed, no GIT involved.
Clean-contaminated	Respiratory, gastrointestinal, or urogenital tract entered under conditions; minor break in aseptic technique.
Contaminated	Fresh, open traumatic wound; gross gastrointestinal tract contamination, spillage from biliary or urinary tract; incisions in inflamed sites; major break in aseptic technique.
Infected , dirty	Traumatic wound with organic debris, foreign body, and devitalized tissue; viscus perforation; purulent debris encountered

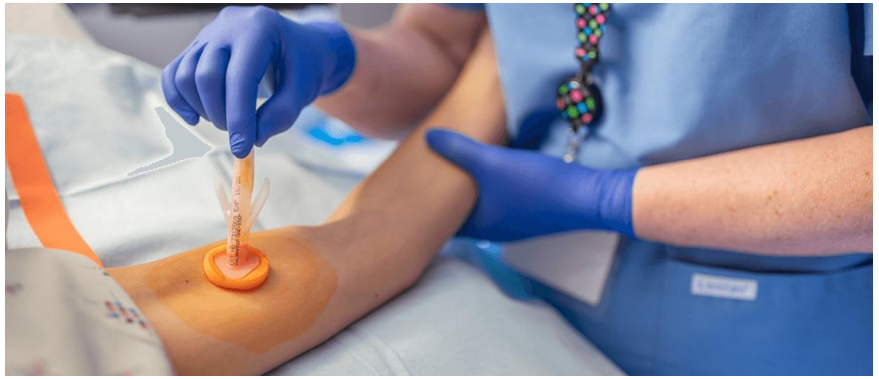
PREVENTION OF SURGICAL INFECTION

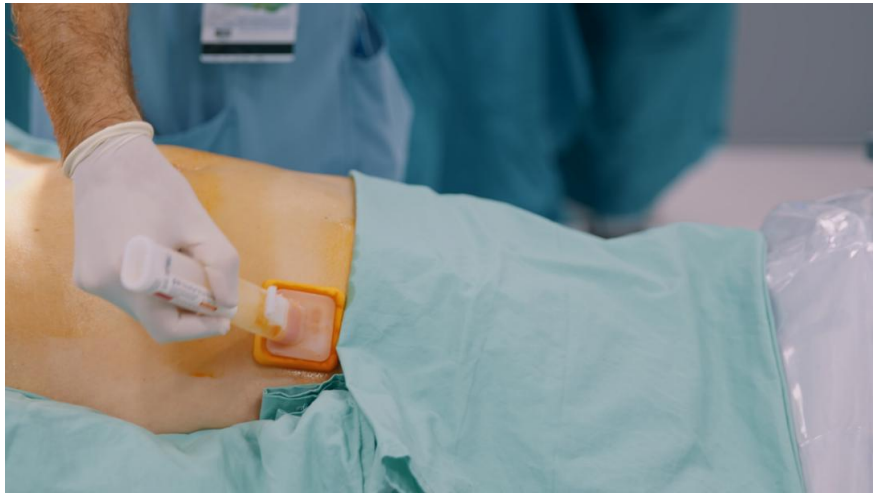
- ✓ **Pre-OP prevention**
- ✓ **Intra-OP prevention**
- ✓ **Post-OP prevention**

PRE-OPERATIVE PREVENTION

- ✓Staff should always wash their hands.
- ✓Length of patient stay should be kept to a minimum.
- ✓Preop. shaving should be avoided if possible.
- ✓Antiseptic skin prepn. should be standardized.
- ✓Giving Prophylactic antibiotic
- ✓Avoid hypothermia perioperatively & ensure supplemental O2 in recovery.

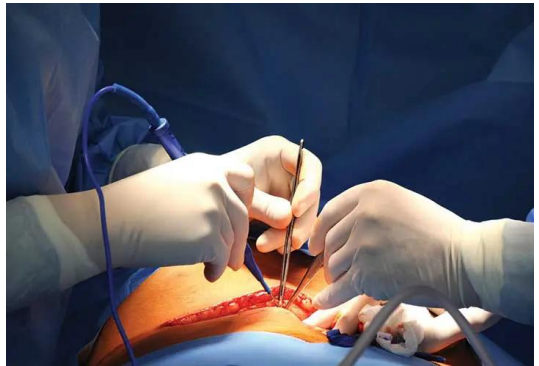






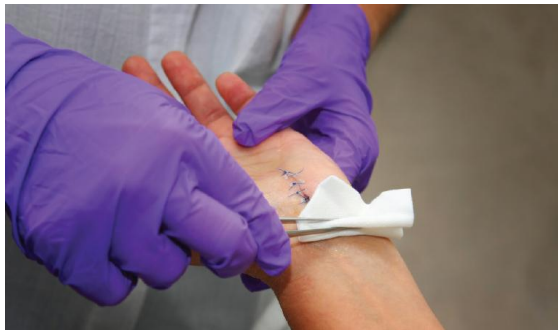
INTRAOPERATIVE PREVENTION

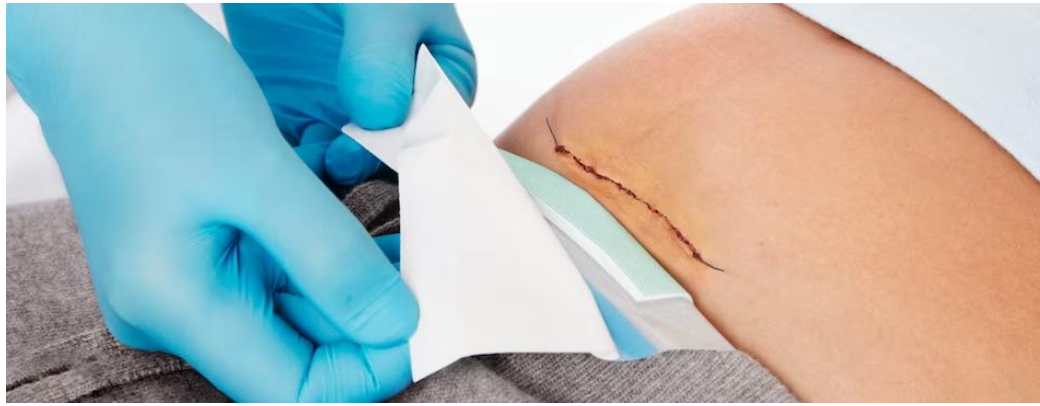
- ✓Ensure - sterile caps, masks, gowns & gloves used
- ✓Skin cleaning - povidone iodine – used
- ✓Drapes - dry & instruments – sterilized
- ✓Table tips- gentle tissue handling / absolute haemostasias, appropriate suture materials, avoiding dead space.
- ✓Short operation as possible



POST-OPERATION PREVENTION

- ✓Using an aseptic non touching technique for removing and changing the wound dressing
- ✓Postoperative cleansing (Use sterile saline for wound cleansing up to 48 hours after surgery).
- ✓Giving the proper antibiotic as physian recommended
- ✓Maintain body tempeture and supplemental O2





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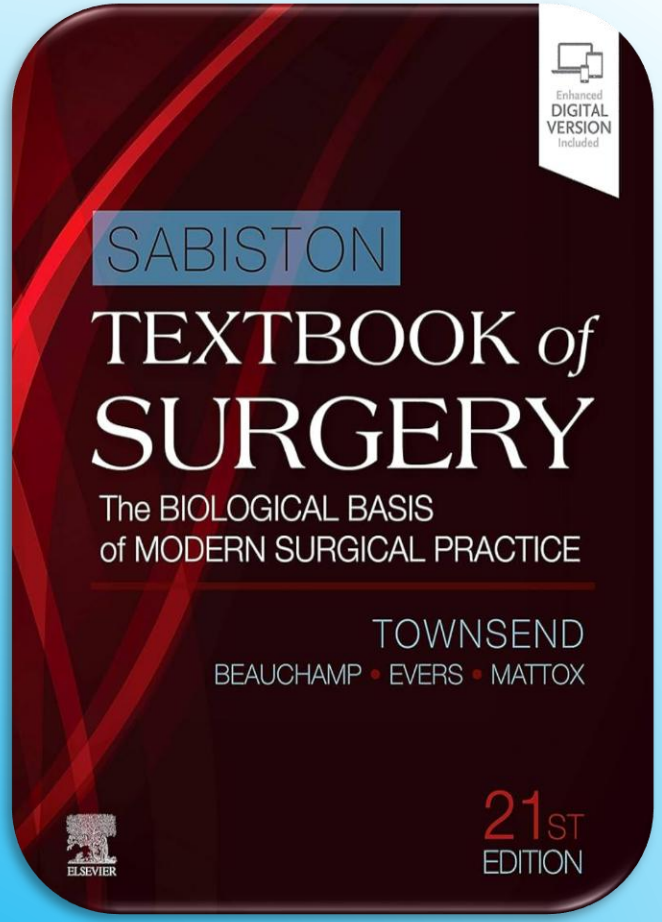

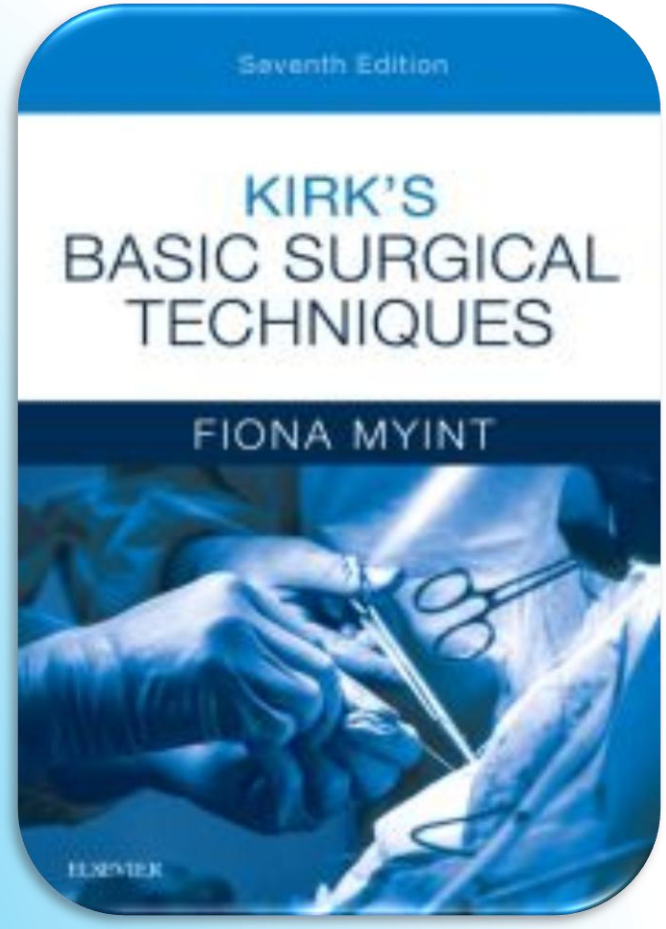

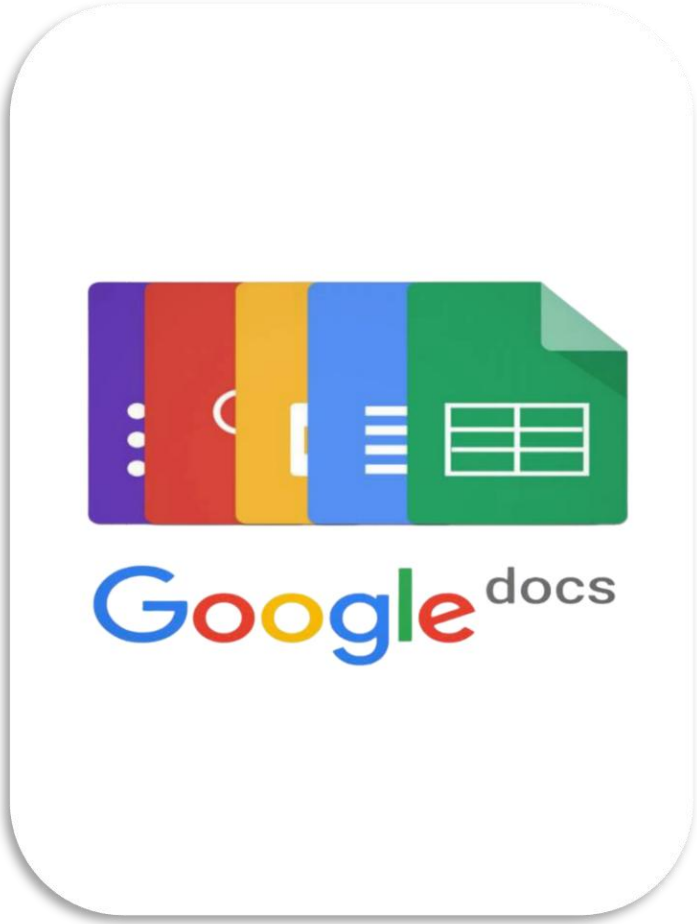

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Contoso

THANK YOU

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