Endometrioid Endometrial Carcinoma
- Selected Morphologic Subtypes and Applicable Differentials

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Disclosure

• I have no financial relationships to disclose

- and -

• I will not discuss off label use and/or investigational use in my presentation
EEC, Usual type

- 80% of endometrial carcinomas
- Postmenopausal women
- Extrauterine presentation uncommon
- RF: unopposed estrogen
- Usually low grade, associated hyperplasia
EEC, Usual type

- Tubular glands
- Gland confluence
  - cribriform
- Labrynthine pattern
- Columnar cells
  - Stratification, mits
- Squamous diff.
  - B9, malignant
EEC Subtypes

• Typical
• Secretory
• With papillae
  – Villoglandular
  – Small nonvillous papillae
• Microglandular
• Sertoliform
• CHEC
• With metaplastic changes
  – Squamous, clear cell change, surface metaplastic changes, ciliated, oxphilic, spindled cells

* Mucinous Ca
Outline

• EEC with clear cell alterations
  – CCC

• EEC with papillary patterns
  – USC (including endometrioid-like USC)

• EEC, high grade
  – Dedifferentiated EC, MMMT

• EEC with mucinous component (*microglandular*)
  – Microglandular hyperplasia
EEC with Clear cells

- Secretory carcinoma
- Glycogenated squamous cells
- Clear cell change (NOS)
  - Glycogen, lipid, mucin, hydropic change

- DDx:
  - Clear cell carcinoma

*many other uterine tumors with clear cells
Secretory carcinoma

- Rare
- Usually grade 1
- Sub/supranuclear glycogen vacuoles
- Low cytologic grade
- ? Progestational stimulus
- Behave ~ usual type EEC
Secretory carcinoma

Carcinomatous architecture
Secretory carcinoma

Infra/supranuclear vacuoles, low grade
Glycogenated squamous cells
Glycogenated squamous cells
Clear cell change (NOS)
Clear cell change (NOS)

Merging with ‘non-clear zones’
Clear cell change (NOS)

Merging, subset of cells retaining columnar shape
Clear cell change (NOS)
Clear cell change (NOS)

Marked vacuolar alteration
Clear cell change (NOS)

Mixture of conventional EEC
Clear cell change (NOS)
Clear cell change (NOS)
Clear cell change (NOS)
Clear cell carcinoma

- < 5% of endometrial carcinoma
- All considered FIGO grade 3
- Tubulocystic, papillary, solid growth
- Polyhedral shape, clear to oxphilic cytoplasm
- Variable atypia (to bizarre), hobnail forms
- Myxohyaline stroma, hyaline bodies
- Non-DES associated
- Worse 5 yr survival vs. EEC*
Clear cell carcinoma

Polyhedral, variable cytologic atypia
Clear cell carcinoma

Clear and oxphilic zones
Clear cell carcinoma

Oxyphilic, tubulocystic
Clear cell carcinoma

Papillary (simple), hyaline stroma
Clear cell carcinoma

Solid, marked atypia
Clear cell carcinoma

‘Empty cores’
Clear cell carcinoma

Hyaline bodies, microcysts
CC change vs. Mixed EEC/CCC

**Clear cell change**
- Merging
- Cribriforming
- Columnar cells
- Low grade atypia
- Squamous differentiation

**Mixed EEC / CCC**
- Discrete
- Tubulocystic, papillary, solid
  - Simple papillae
- Polyhedral, hobnail forms
- Spectrum of low to high
- Myxohyaline stroma, hyaline bodies
- IHC: ER-, more p16/p53
What is this?

Endometrioid-like CCC

Offman & Longacre, 2012
EEC with Papillae

- Villoglandular EEC

- EEC with Small Nonvillous papillae

- DDx:
  - Uterine serous carcinoma
    * Endometrioid-like (tubular) serous carcinoma
Villoglandular EEC

- Most common papillary pattern in EEC
- Often mixed with conventional EEC patterns
- Long, slender, villous papillae
- Thin fibrovascular cores
- VG patterns located superficial > myoinvasive
- Typical EEC cytology, grade 1-2
- Behaves as per conventional EEC*
Villoglandular EEC
Villoglandular EEC
Villoglandular EEC

Long slender papillae, thin f-v cores
Villoglandular EEC
Villoglandular EEC

Typical EEC cytology
Villoglandular EEC

Slit-like spaces mimicking USC
Villoglandular EEC

Grade 2 nuclei mimicking USC
Villoglandular EEC
Villoglandular EEC
Villoglandular EEC

p53
EEC with Small Nonvillous Papillae
(Murray et al., 2000)

• 8% of EEC

• Conventional EEC containing small papillae within glands or on villi of VGEEC

• Buds of rounded cells, ample eosinophilic cytoplasm, low N:C, lack fibrovascular cores
  – complex intraglandular proliferations

• Abortive (or overt) squamous differentiation

• Low grade cytology

• Behaves as per conventional EEC
Cellular buds, lacking cores, ++ eosinophilic cytoplasm, low grade
EEC with SNVP

More complex pattern