

**DETERMINACIÓN DE SITIO DE ORIGEN  
EN METASTASIS DE CARCINOMA  
PRIMARIO DESCONOCIDO**

HOSPITAL ESPAÑOL DE MÉXICO

- **3 a 5% de los casos de metástasis de carcinoma se presentan con primario desconocido.**
- **Ganglios linfáticos, hígado, hueso y pulmón.**
- **Pronóstico y tratamiento.**



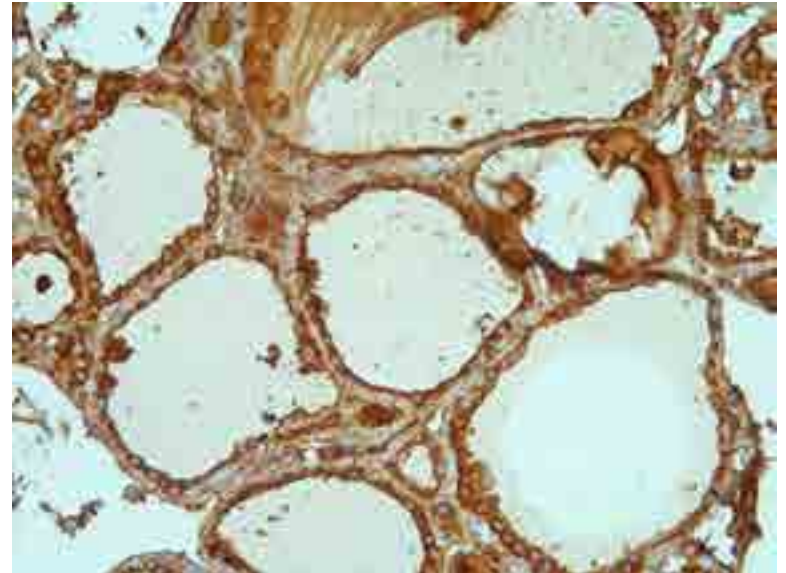
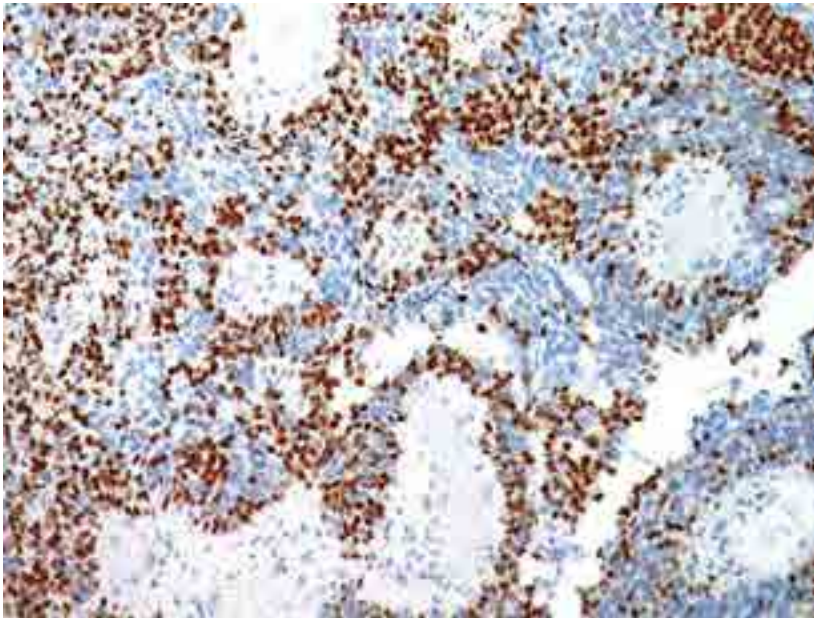
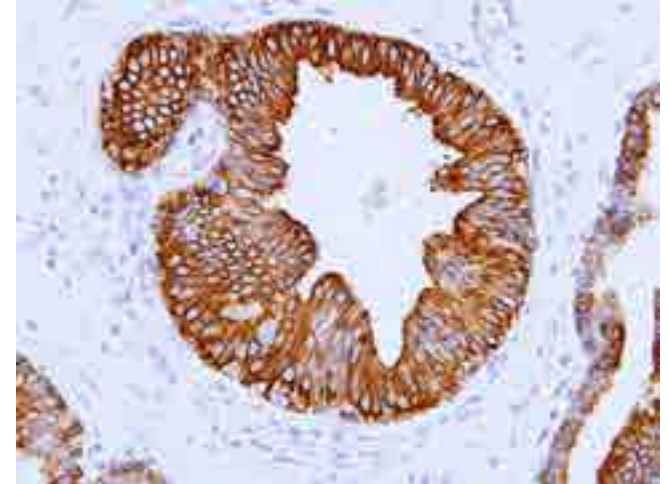
**INFORMACIÓN  
CLÍNICA**



**CARACTERÍSTICAS  
MORFOLÓGICAS**

# MARCADORES DISPONIBLES

- Citoqueratinas
- Factores de transcripción
- Proteínas específicas de órgano



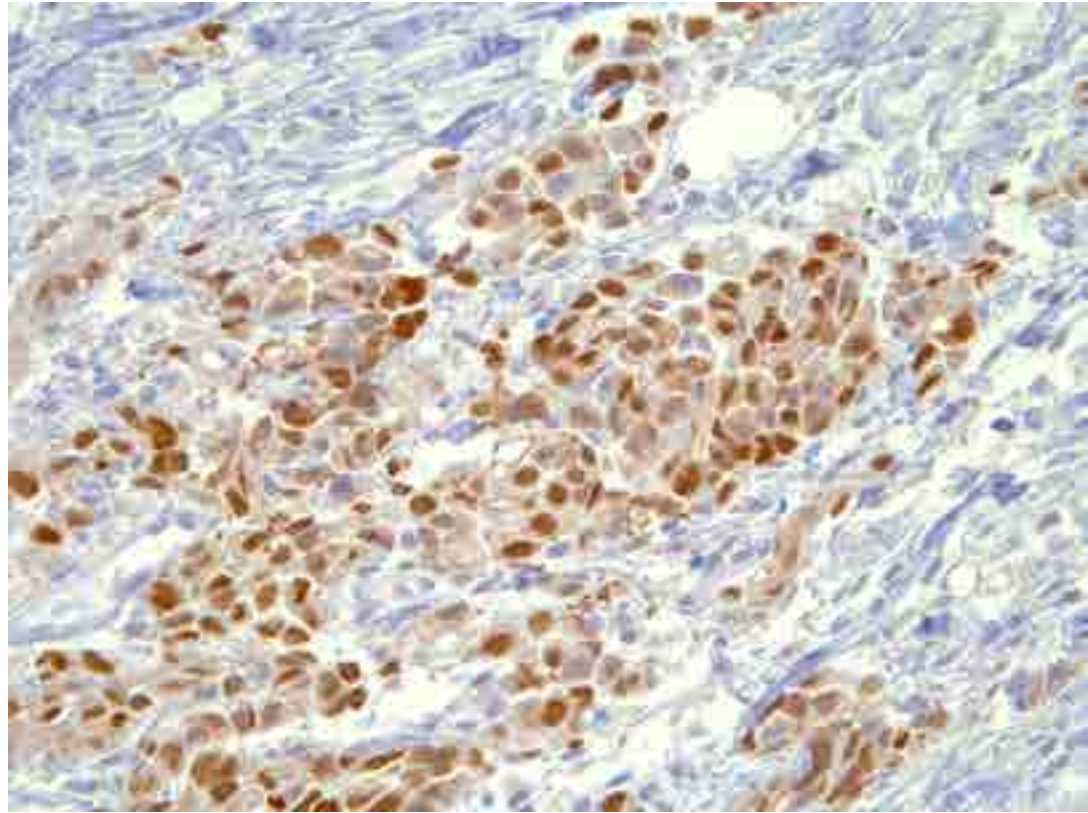
# ABORDAJE DE NEOPLASIAS INDIFERENCIADAS

|                       | S-100 | CD 45 | CK<br>AE1/AE3 | CD30  | SALL 4 |
|-----------------------|-------|-------|---------------|-------|--------|
| <b>Linfoma</b>        | -     | +     | -             | - / + | -      |
| <b>Carcinoma</b>      | -     | -     | +             | - / + | -/+    |
| <b>Melanoma</b>       | +     | -     | -             | - / + | -      |
| <b>Sarcoma</b>        | -     | -     | -             | -/+   | -      |
| <b>Tumor germinal</b> | -     | -     | -/+           | -/+   | +      |

# MARCADORES DISPONIBLES

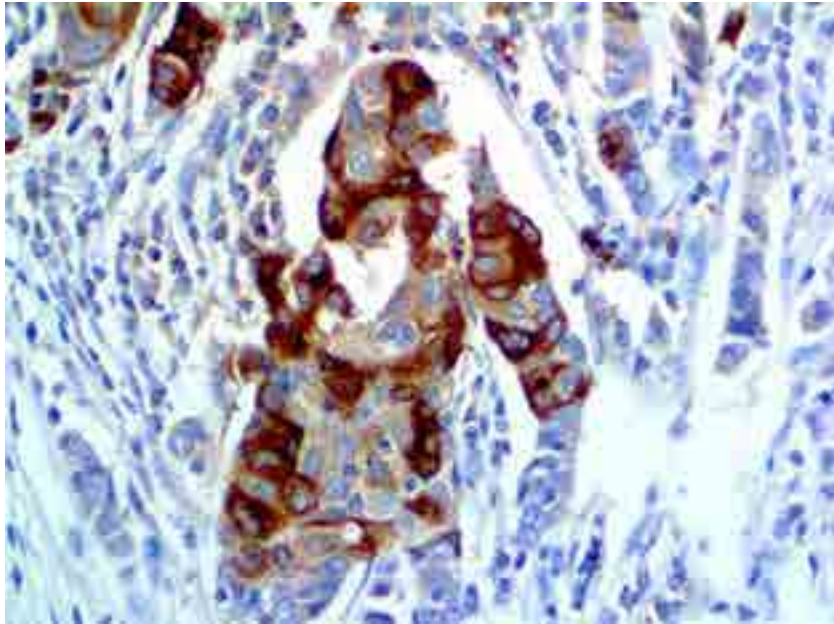
- **Citoqueratinas:**
  - **CKAE1/AE3**
  - **7**
  - **20**
  - **5/6 APM; epitelio complejo (escamoso, urotelial, mioepiteliales)**
  - **17 y 19: APM; epitelio complejo (pancreatobiliar)**
  - **8/18: BPM; epitelio simple (TGI, hepatocitos)**

- **Receptores hormonales**
  - **Estrógeno/Progesterona**
    - **Glándula mamaria**
    - **Ovario**
    - **Endometrio**
    - **C. neuroendocrinos\***

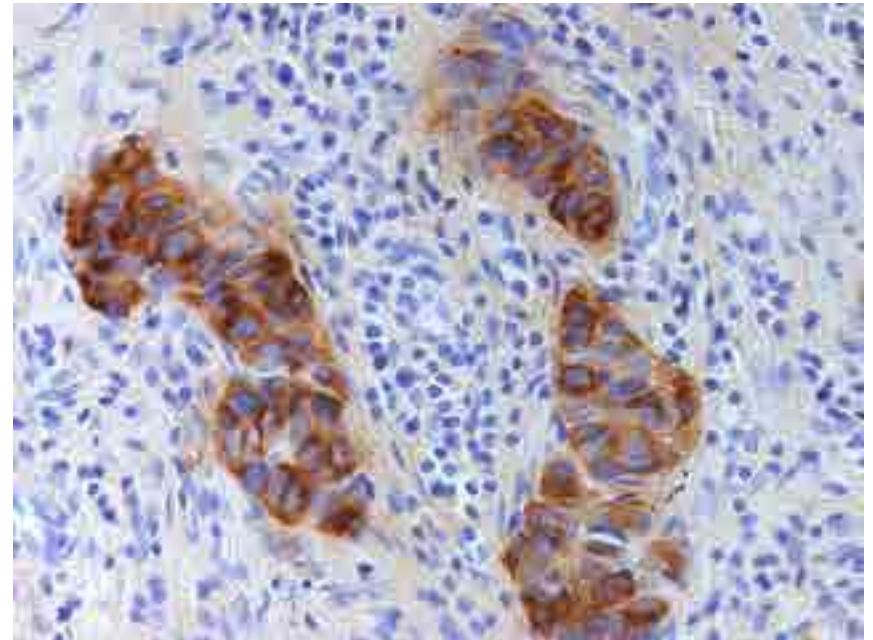




- Mamoglobina
  - Glándula mamaria
  - Glándula salival
  - Glándula sudorípara

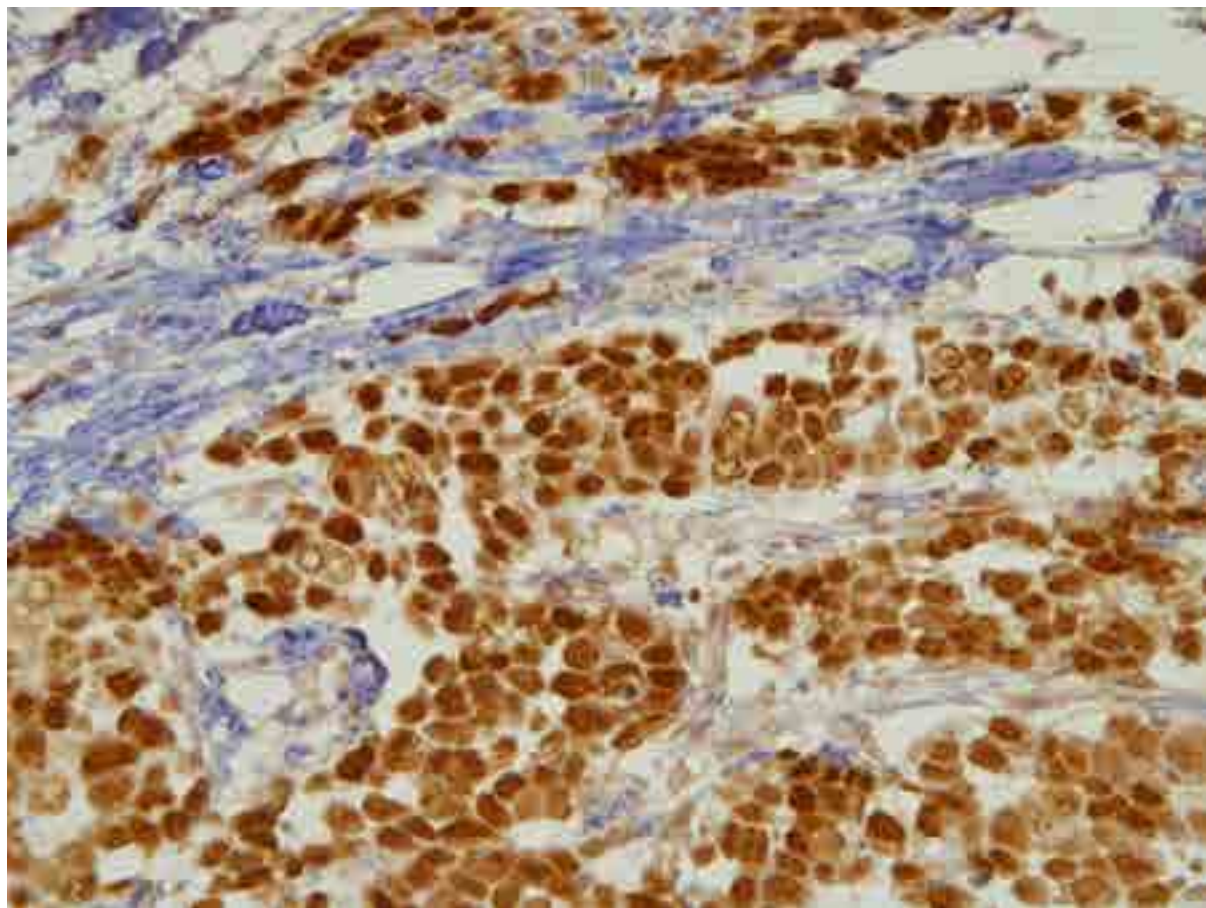


- GCDFP-15



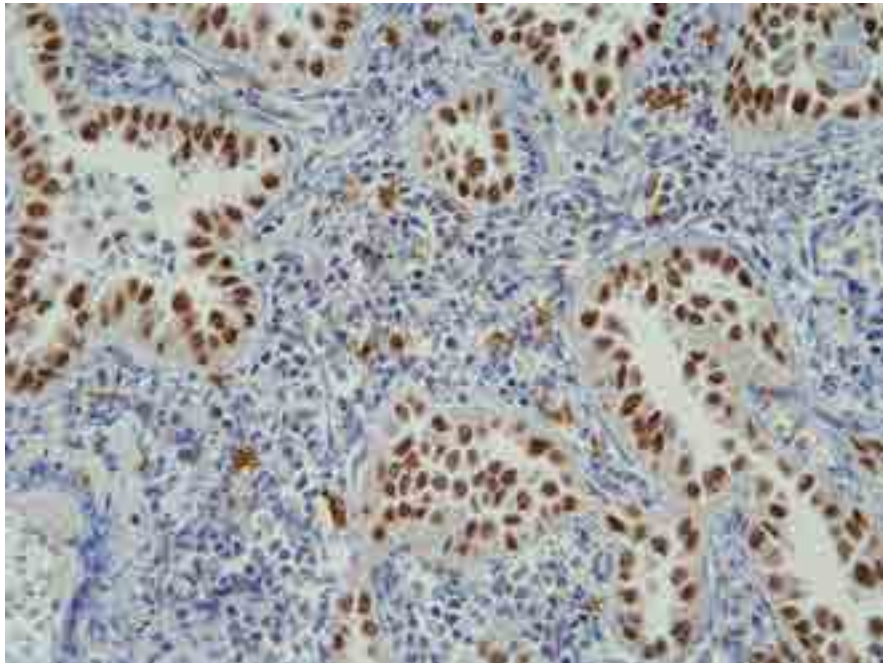


- **GATA-3:**
  - Glándula mamaria
  - Tracto urinario (Transicional)
  - Tumores de anexos y epitelio escamoso
  - Linfocitos T



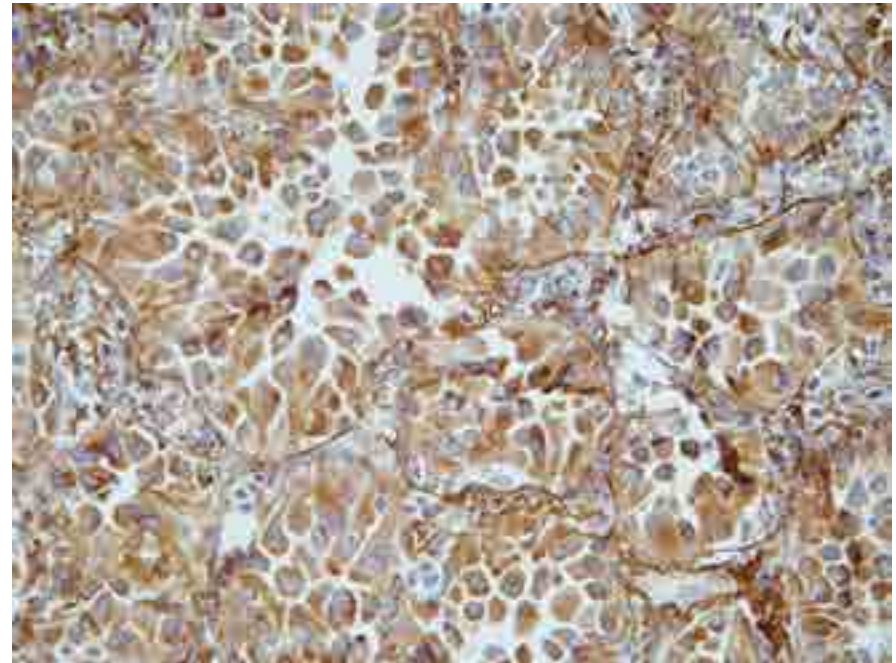
- **TTF-1**

- Tiroides
- Epitelio respiratorio
- **\*\*C. Neuroendocrinos**



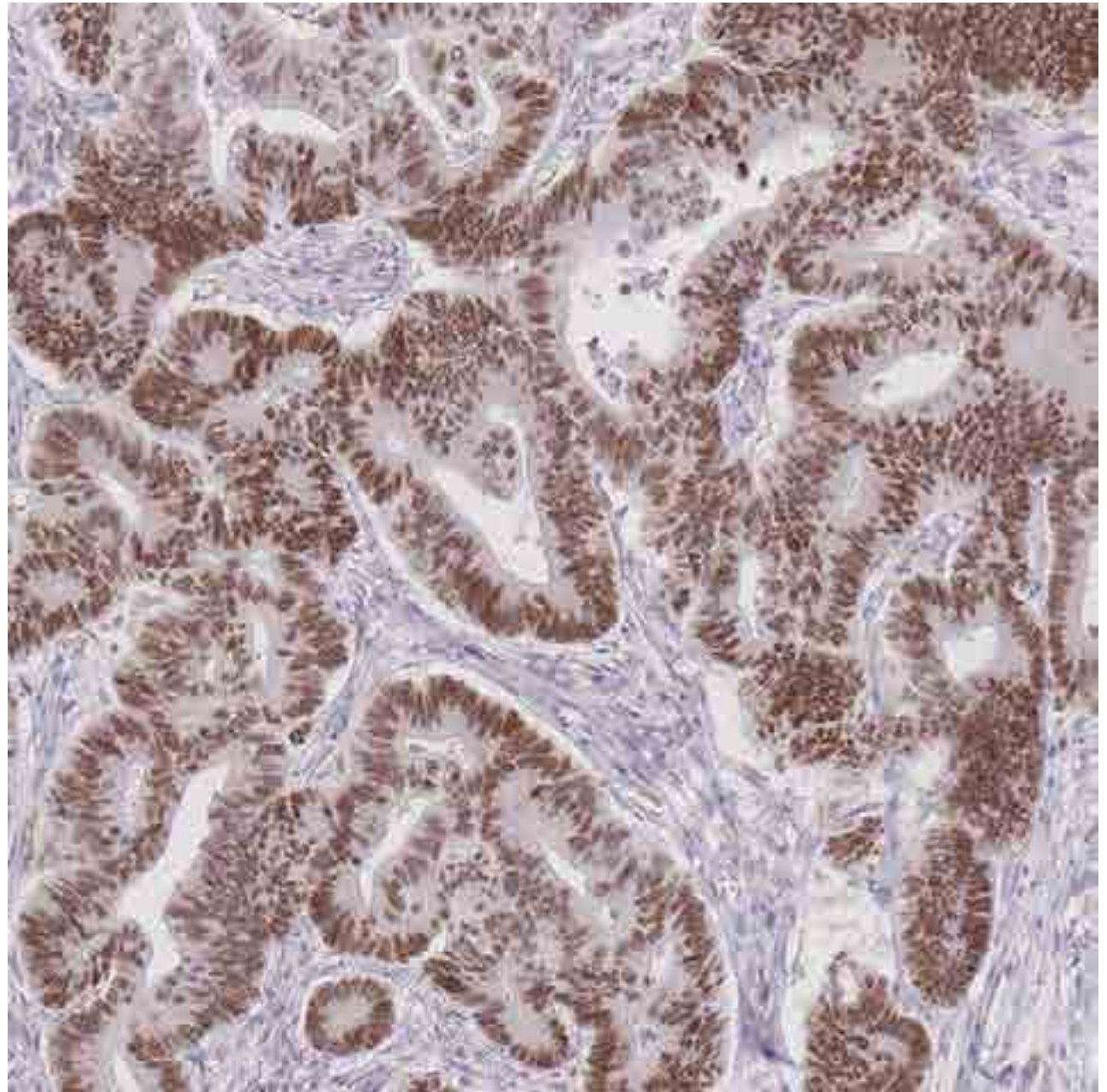
- **Napsin-A**

- Neumocitos tipo II y macrófagos alveolares
- Carcinoma papilar renal
- Carcinoma de células claras de ovario



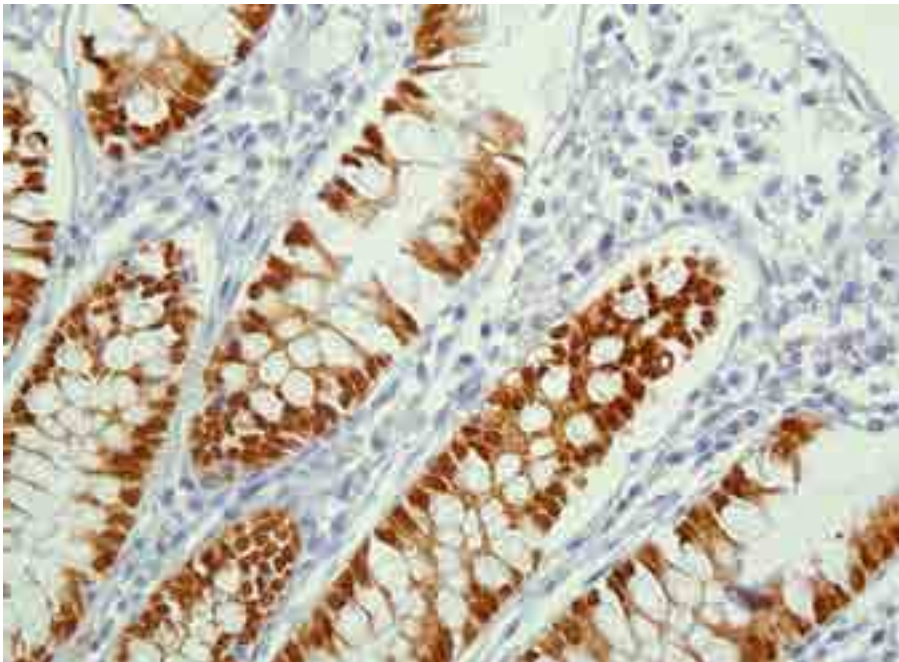


- **SATB-2**
  - Colon



- **CDX-2**
  - Colon
  - Estómago, páncreas y vía biliar (heterogéneo)
  - Carcinomas con diferenciación GI.
  - Neuroendocrinos GI

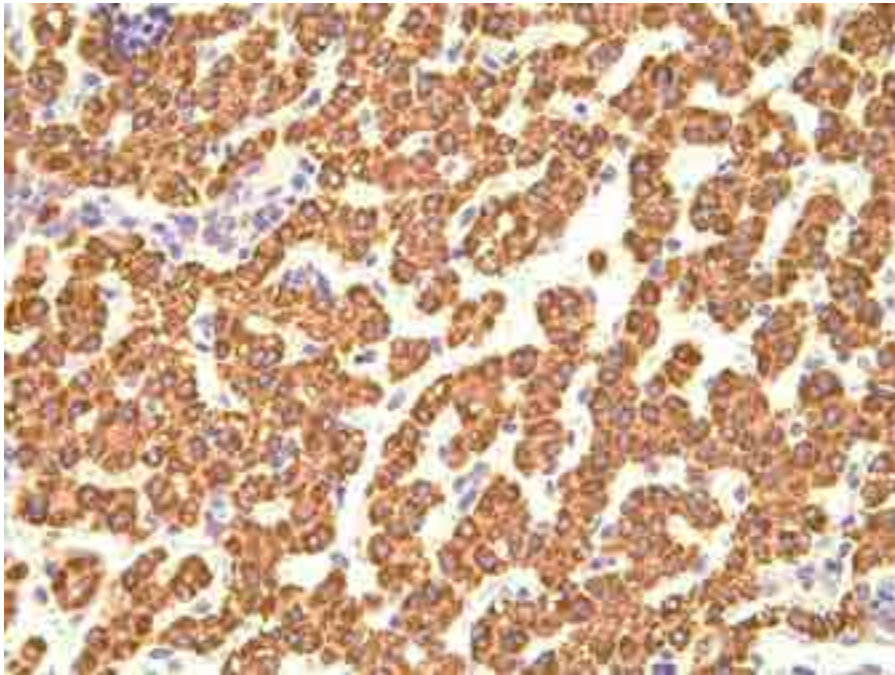
- **Villina**
  - Microvellosidades
  - Colon
  - Estómago y pancreatobiliar
  - Neuroendocrinos (citoplasma)





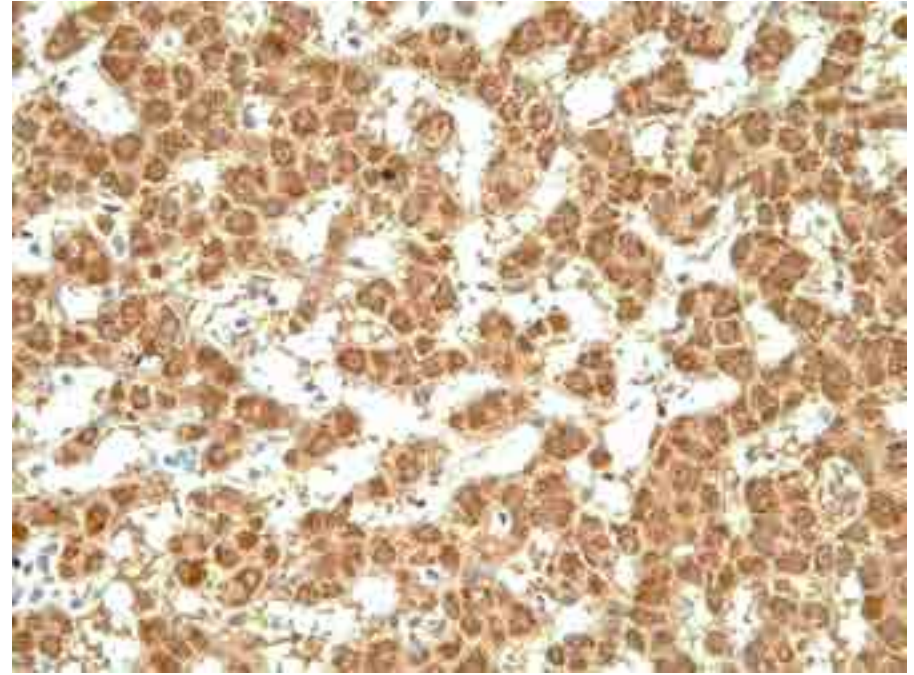
- **Hep-Par 1**

- Hepatocitos
- 1-10%: pulmón, ovario, estómago y corteza adrenal.



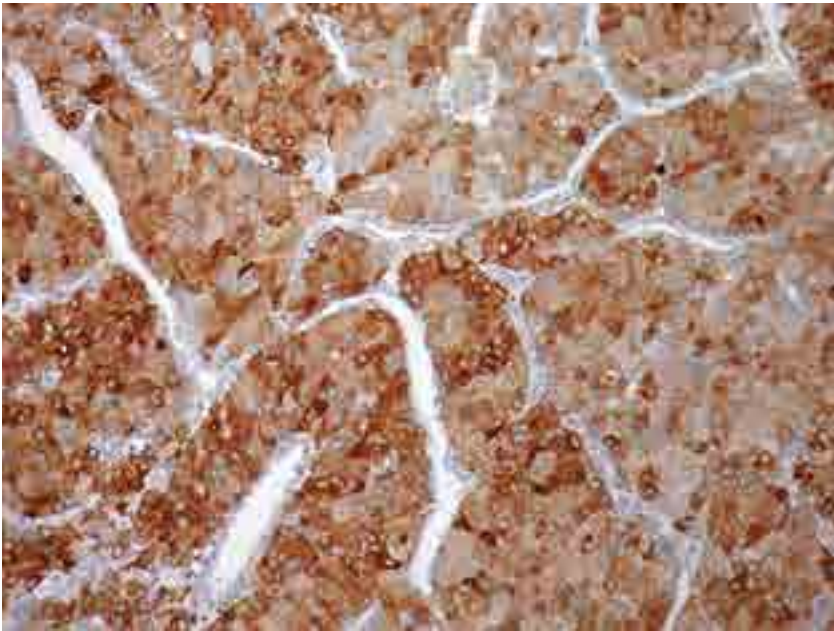
- **Arginasa 1**

- C. Hepatocelular



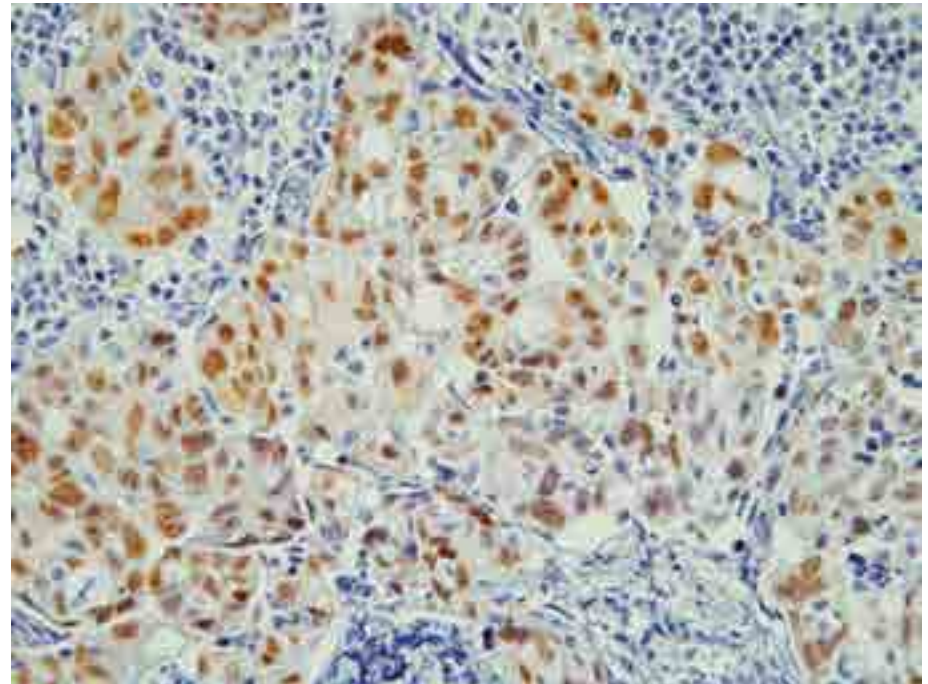
- **Glipican 3**

- Hígado no neoplásico vs. Adenoma
- Tumor germinal: senos endodermicos



- **WT-1**

- Epitelio de superficie del ovario (carcinoma seroso)
- Carcinoma seroso de la trompa de Falopio
- Adenocarcinoma primario de peritoneo





- **PAX-8**

- Tiroides

- Riñón

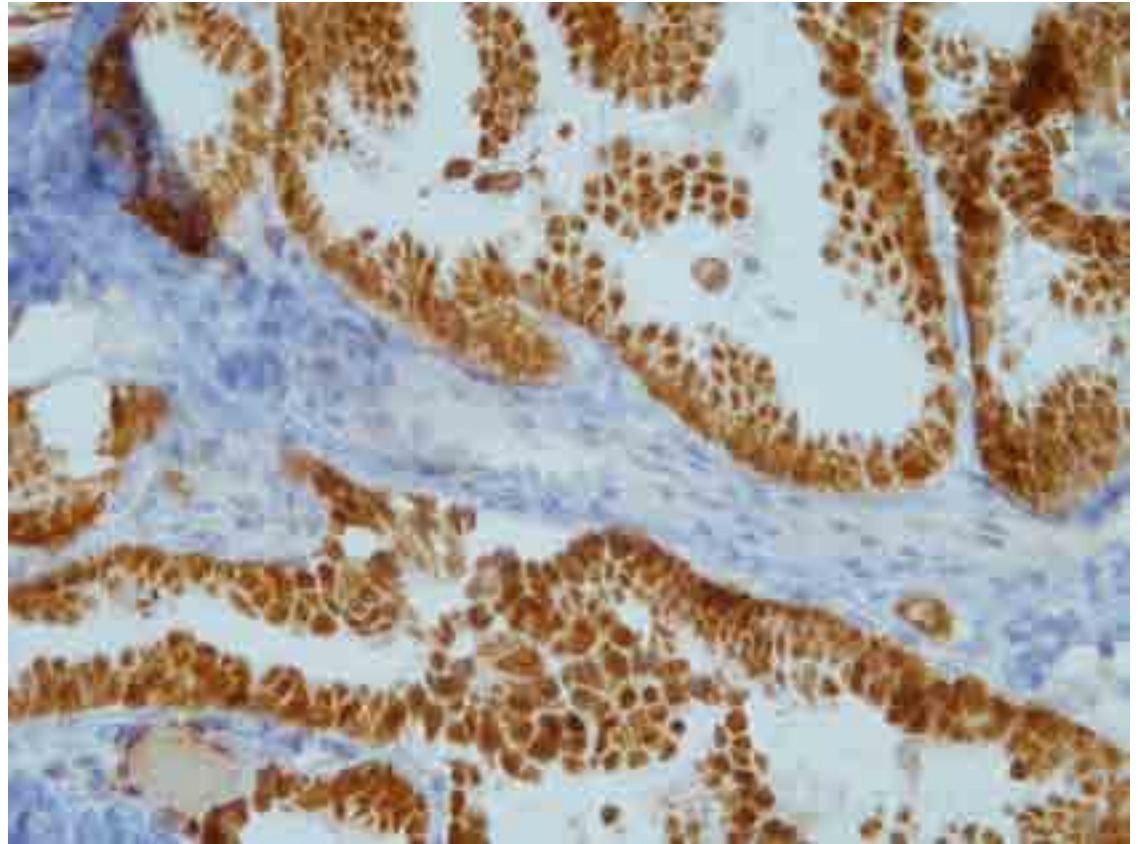
- **Conductos Mülleriano**

- T. Falopio

- Endocérvix

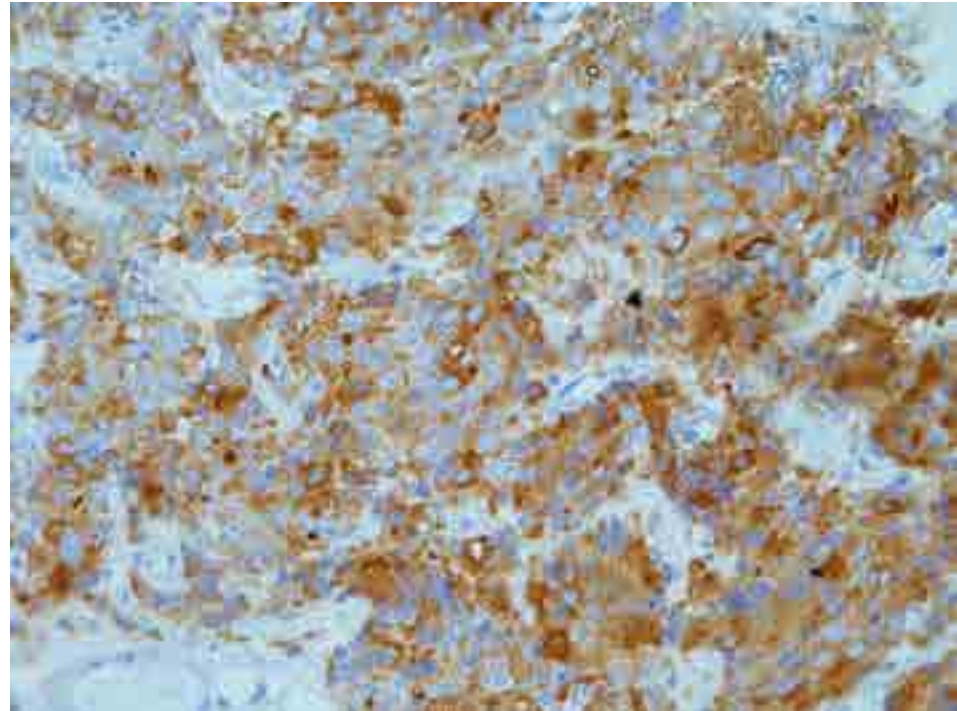
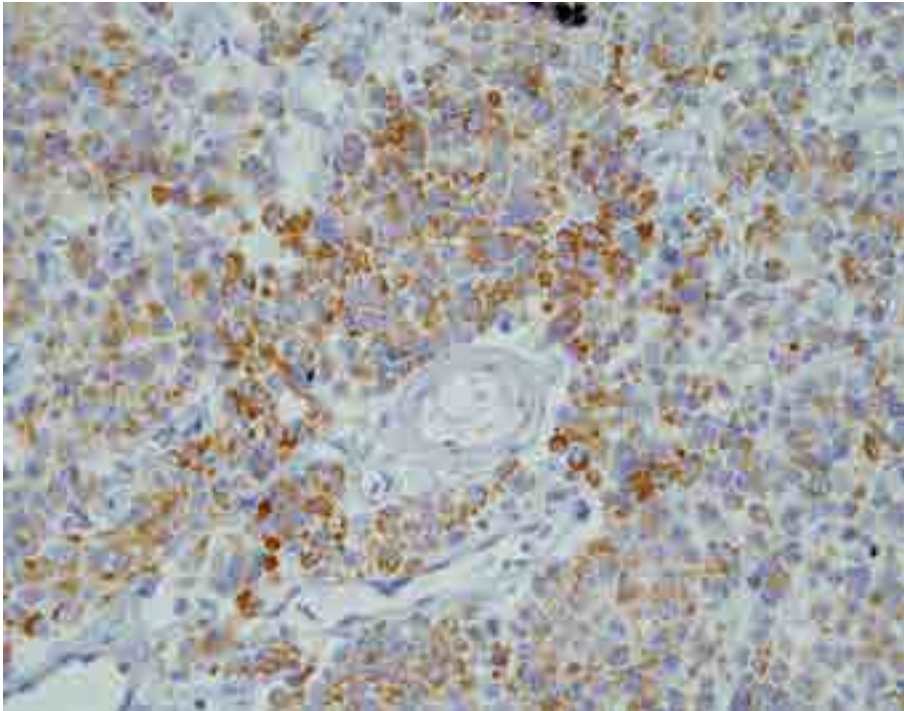
- Endometrio

- **DD ovario vs mama**



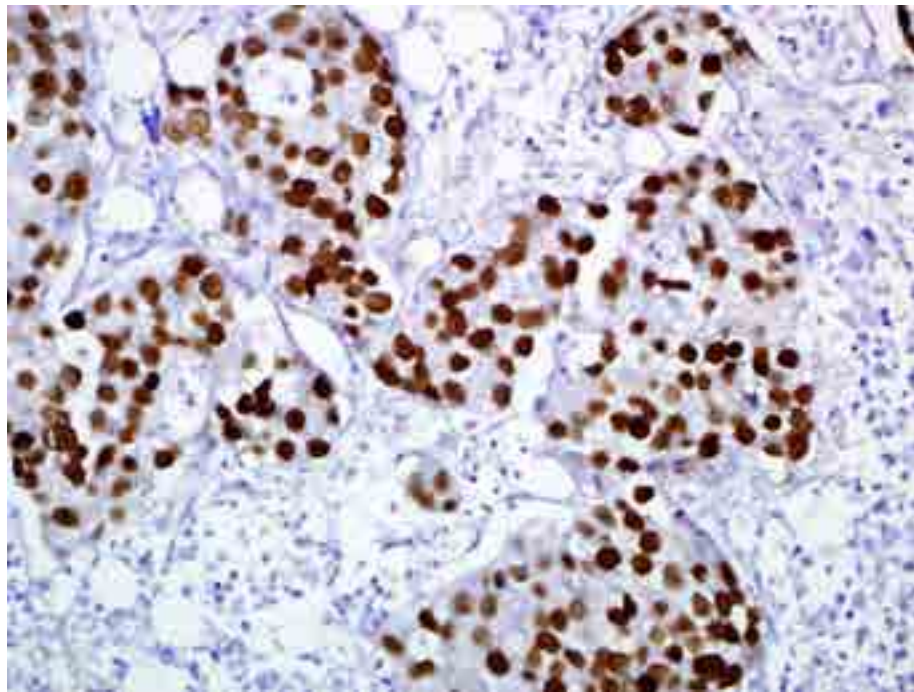
- **Antígeno Próstata Específico**
  - Próstata
  - Focal en G. salival y páncreas

- **Fosfatasa ácida prostática**
  - Próstata

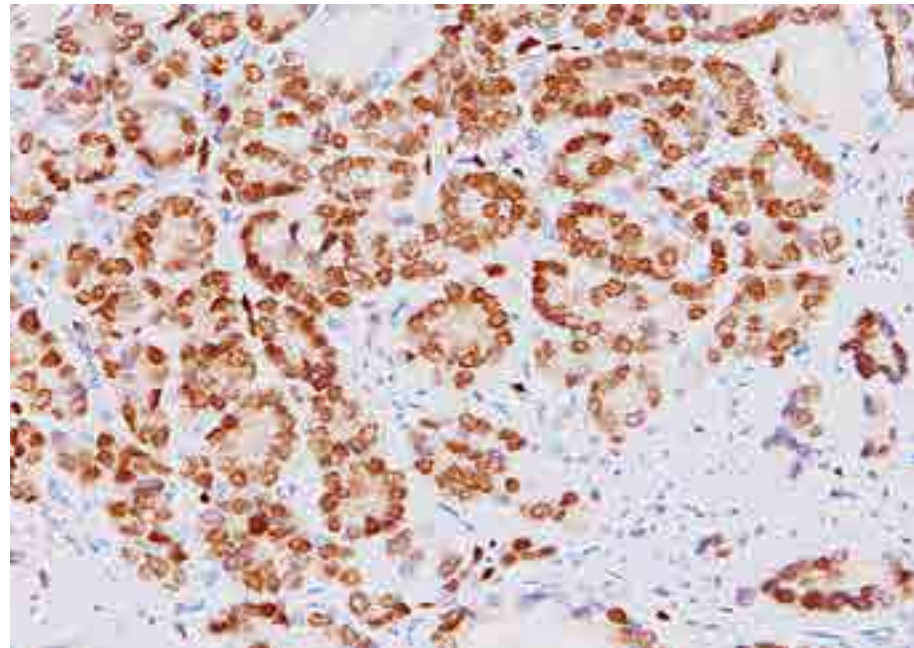




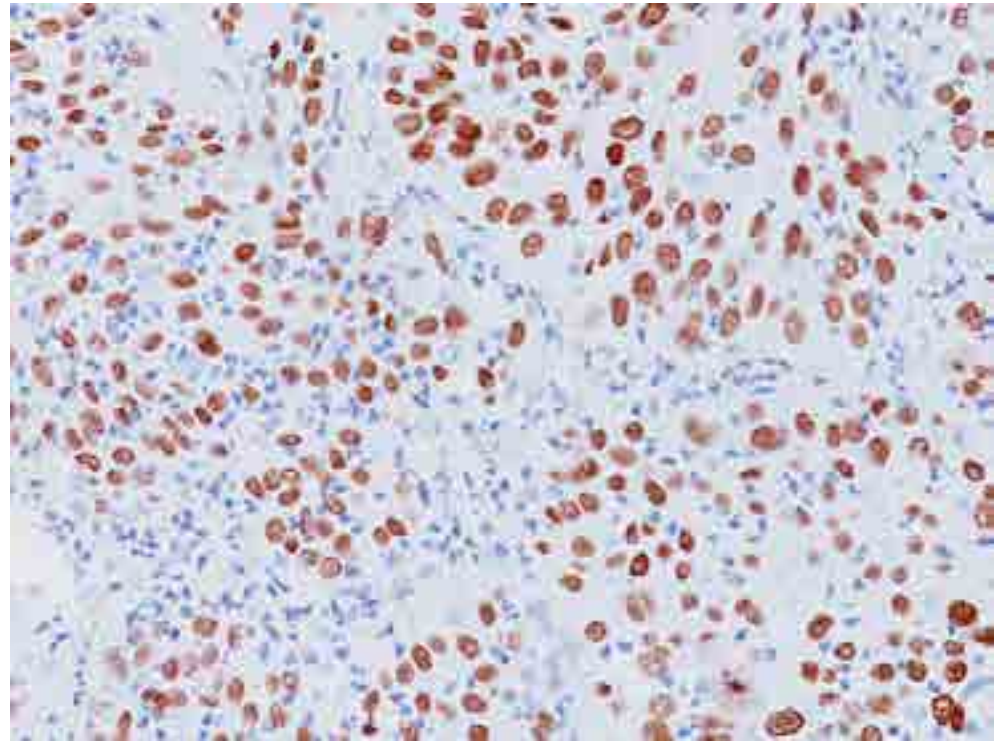
- **NKX 3.1**
  - Próstata (alto grado)



- **ERG**
  - 50%

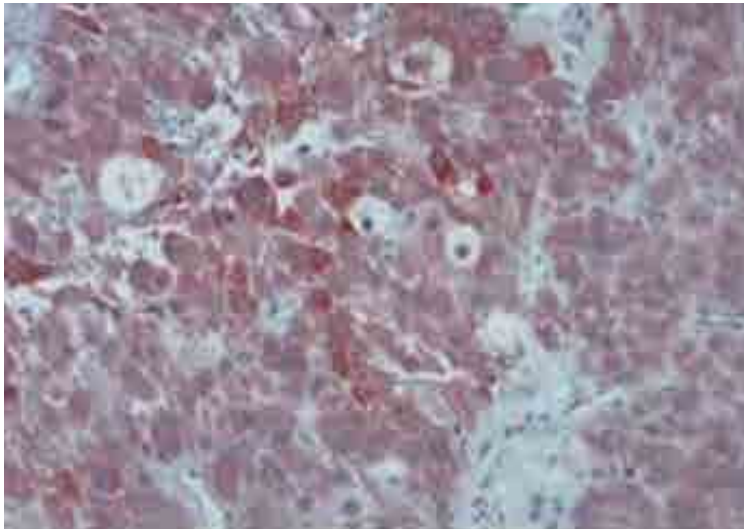


- **Proteínas p63 y p40**
  - Epitelio escamoso
  - Epitelio transicional
  - Diferenciación mioepitelial
    - Adenoideo quístico
    - C. Glándula salival



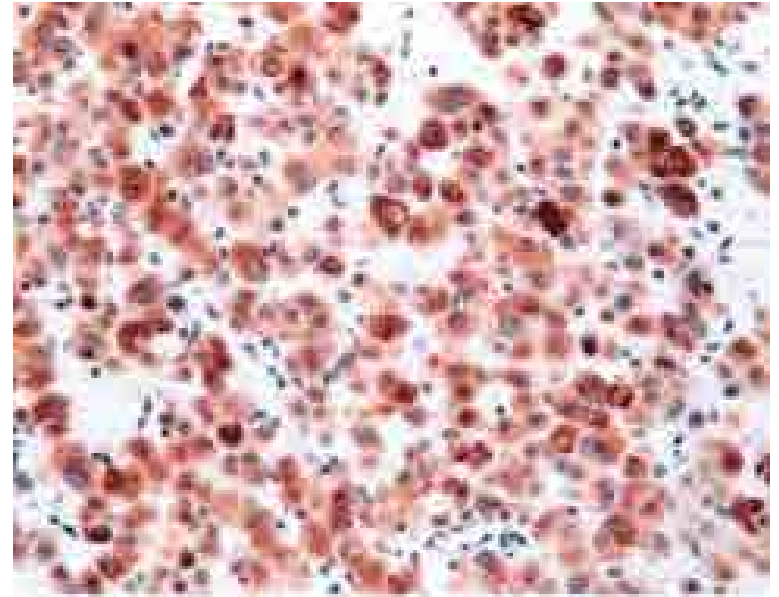
- **$\alpha$  Inhibina**

- Tumores primarios de la corteza suprarrenal vs metástasis



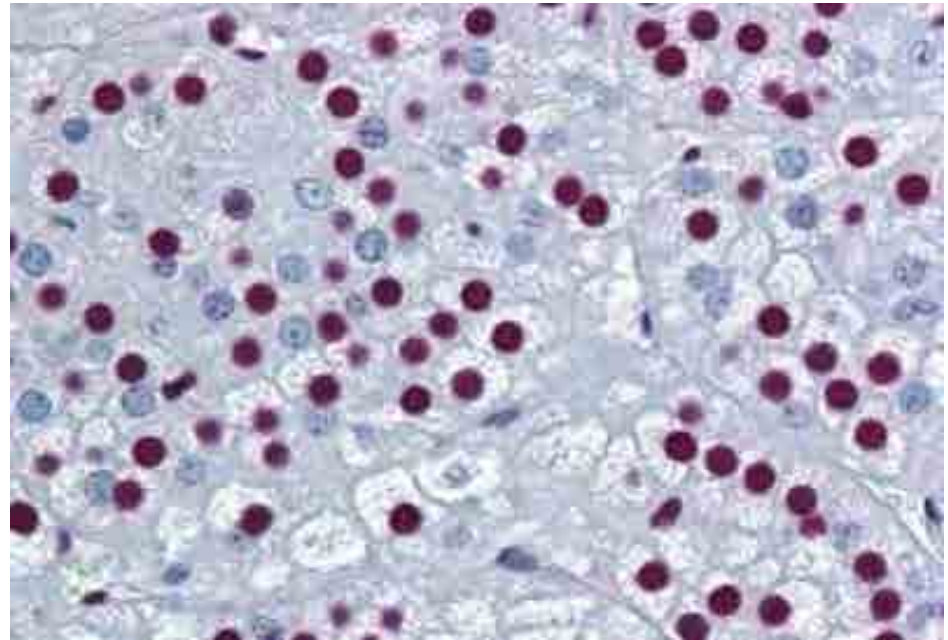
- **MART-1**

- Diferenciación de corteza suprarrenal



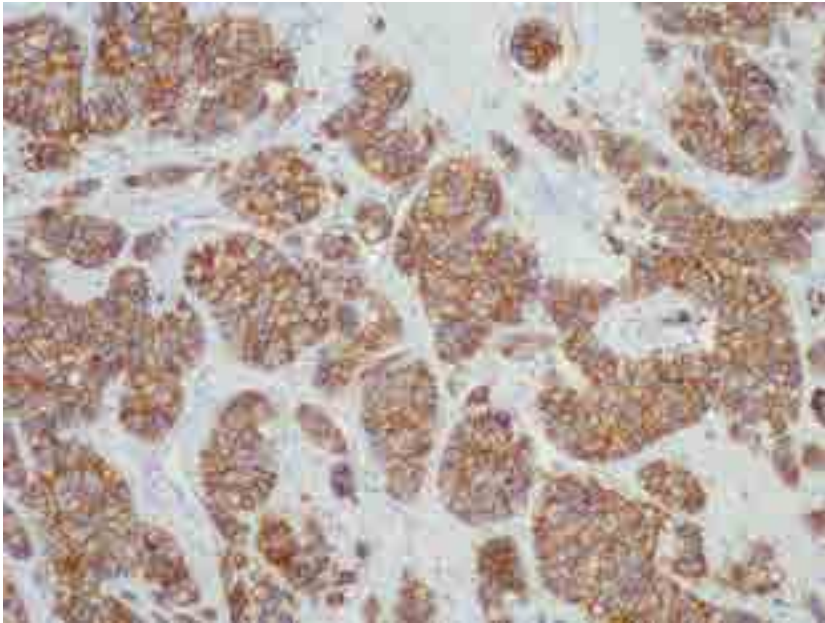


- **Factor esteroideogénico 1**
  - **Neoplasias corteza suprarrenal**
  - **DD células claras.**
    - **Renal**
    - **Ovárico**
    - **Cordoma**

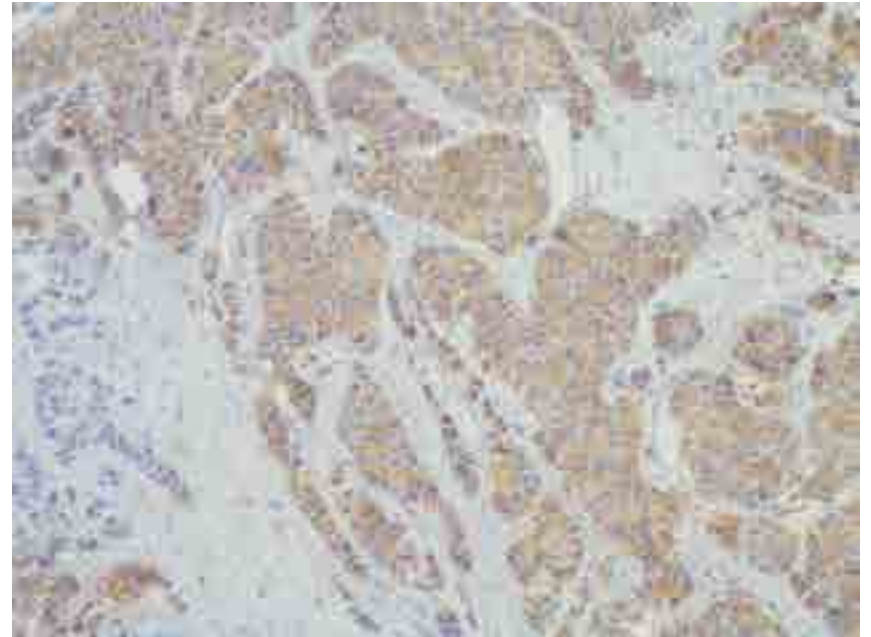




- CD56



- Sinaptofisina
- Cromogranina

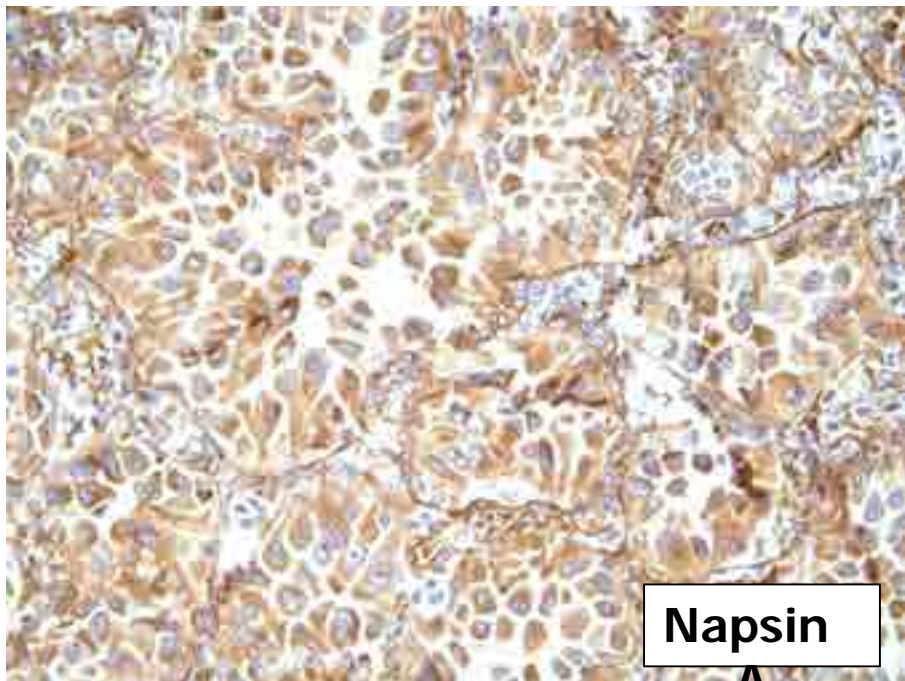


## Expresión de CK7 Y CK20 para determinación de sitio primario

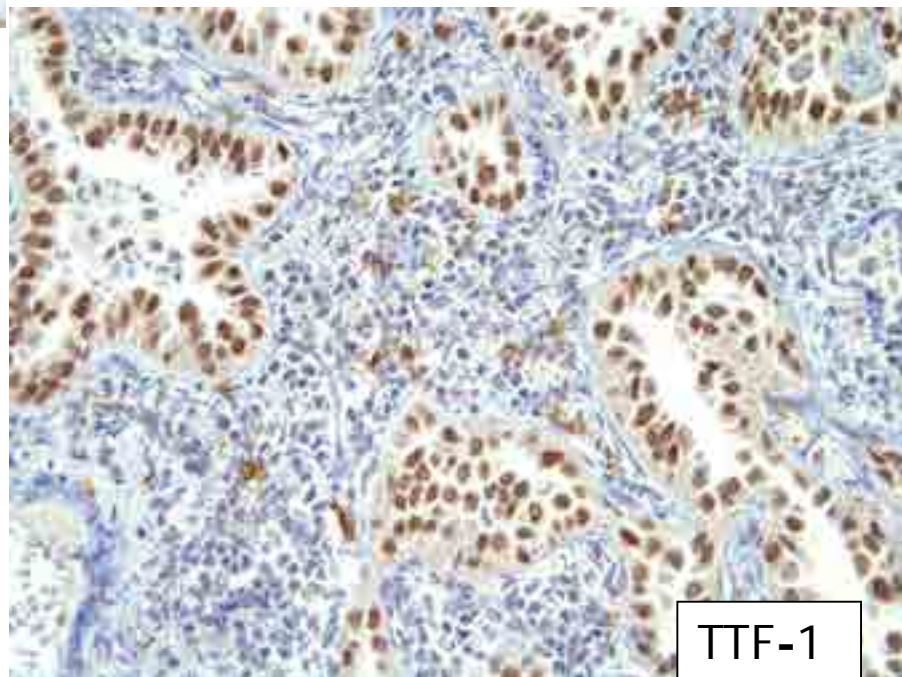
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|-------------|--------------|--|
| <b>CK7+</b> | <b>CK20-</b> | <b>Mama<br/>Ovario<br/>Pulmón<br/>Endometrio<br/>Tiroides</b>                          |
| <b>CK7+</b> | <b>CK20+</b> | <b>T. GI superior<br/>Páncreas<br/>Urotelial</b>                                       |
| <b>CK7-</b> | <b>CK20+</b> | <b>Colorrectal<br/>Células Merkel</b>  |
| <b>CK7-</b> | <b>CK20-</b> | <b>Próstata<br/>Hepatocelular<br/>Células renales<br/>Corteza adrenal<br/>Escamoso</b> |

# CK7+ /CK20-

| Primario                    | Marcadores  |
|-----------------------------|---|
| Adenocarcinoma de pulmón    | TTF1+<br>Napsin A +<br>GATA 3 -   |
| Glándula mamaria            | GATA 3 +<br>Mammoglobina/ GCDFP15 +<br>R. hormonales +                    |
| Adenocarcinoma endocervical | PAX8 +/-<br>p16 + difuso<br>R. estrógenos y progesterona +/-              |
| Adenocarcinoma endometriode | PAX8 +<br>R. estrógenos y progesterona +/-<br>CK5/6 (metaplasia escamosa) |



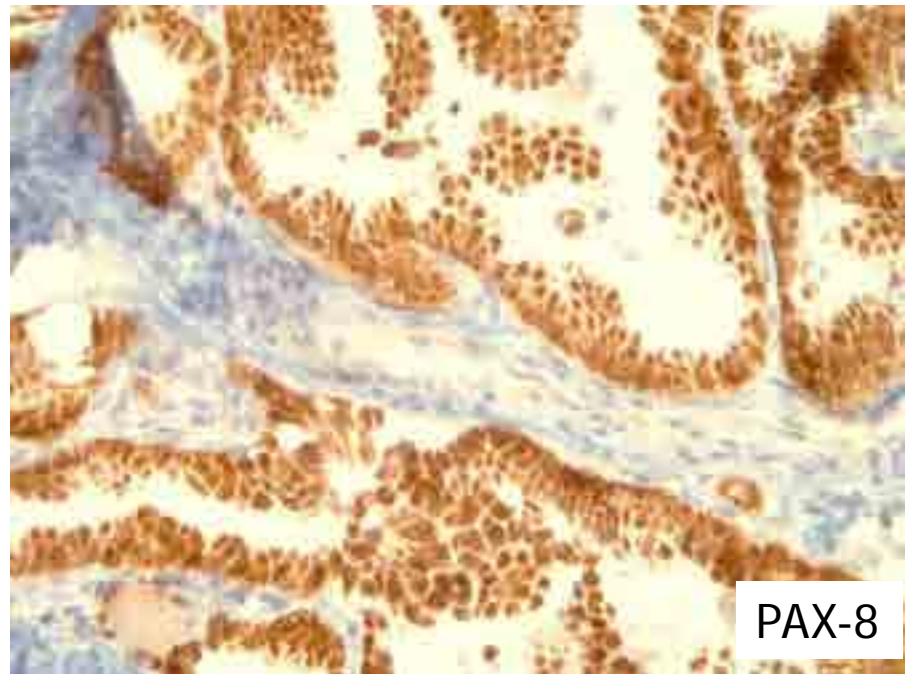
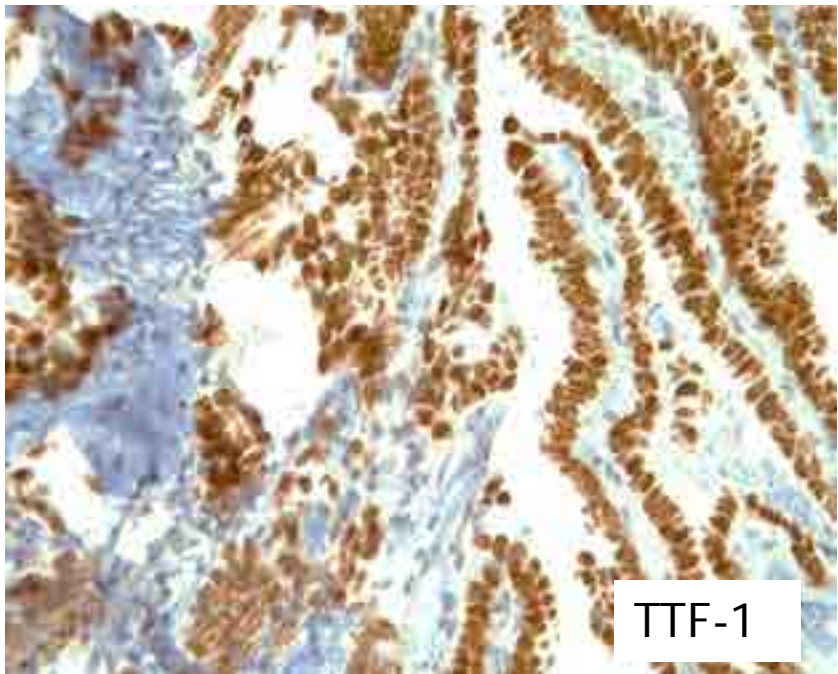
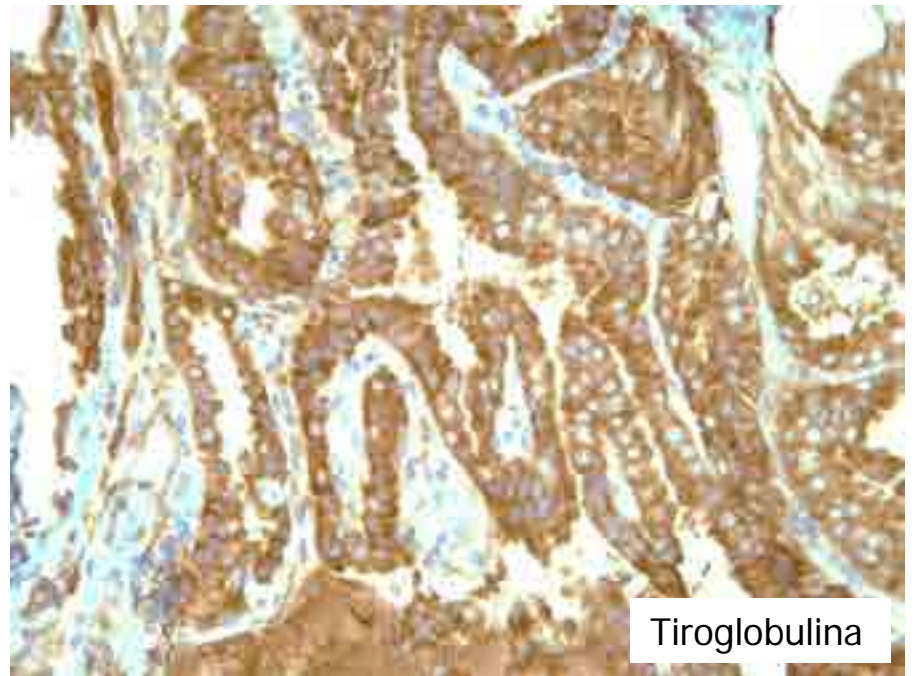
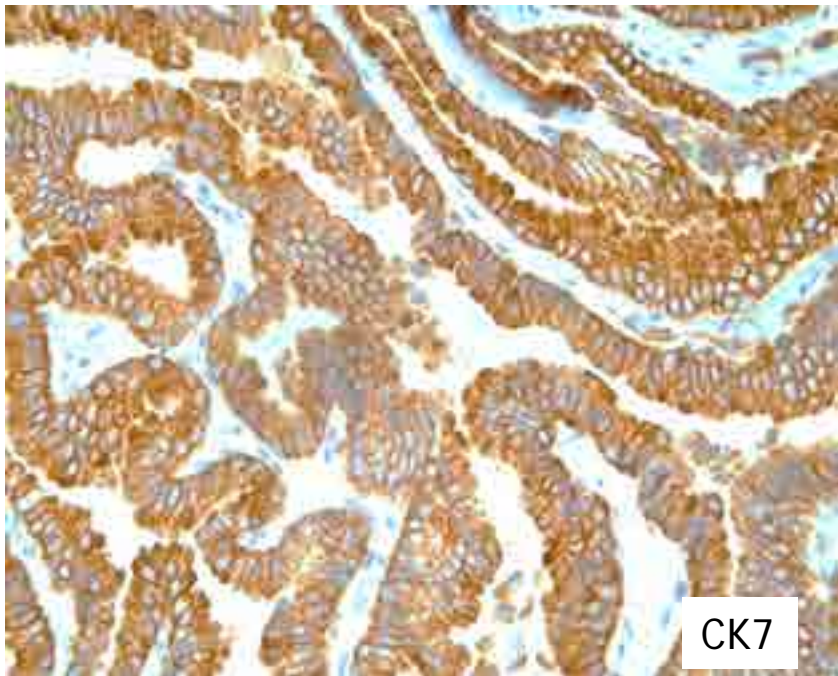
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# CK7+ /CK20-

| Primario   | Marcadores  |
|--|---|
| <b>Carcinoma seroso de ovario</b>                | <b>PAX8+</b><br><b>R. estrógenos y progesterona</b><br><b>+/-</b><br><b>WT-1 +</b><br><b>GATA 3 -</b> |
| <b>Carcinoma de células claras de ovario</b>     | <b>PAX-8+</b><br><b>Napsin A +</b><br><b>R. hormonales -</b>  |
| <b>Carcinoma papilar o folicular de tiroides</b> | <b>PAX8+</b><br><b>TTF-1 +</b><br><b>Tiroglobulina +</b>  |

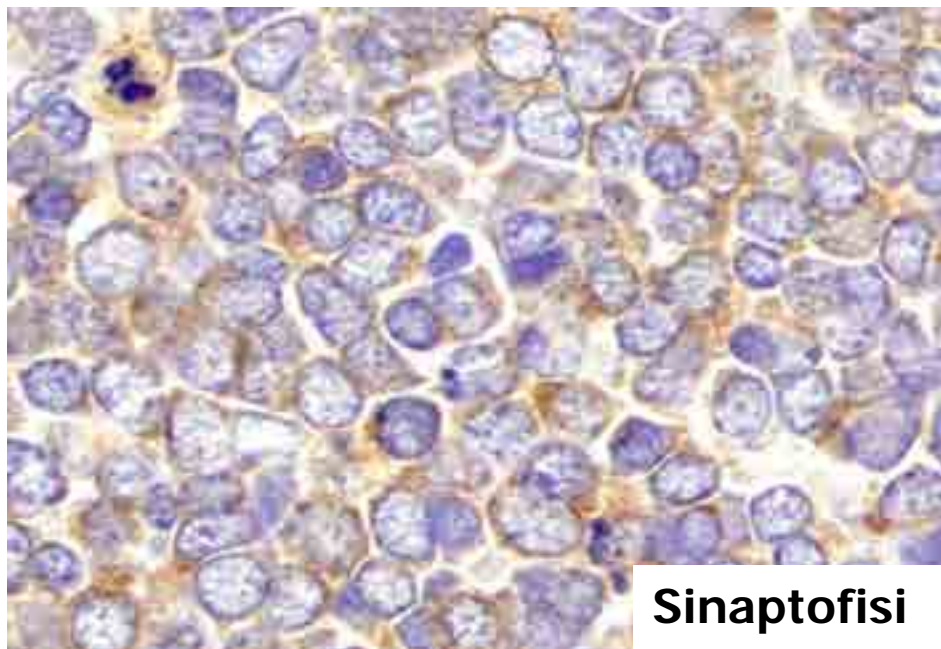
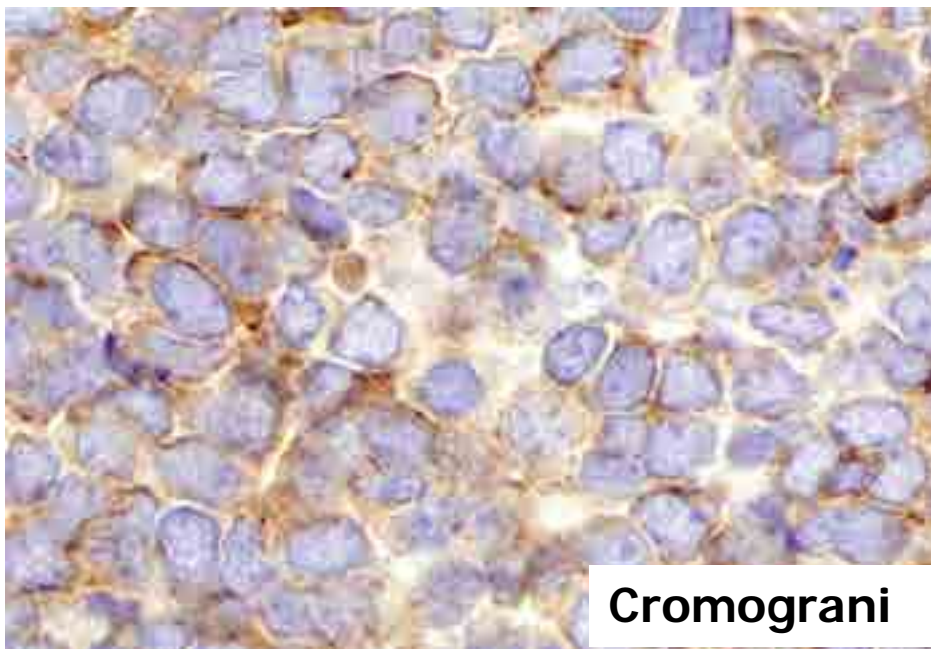
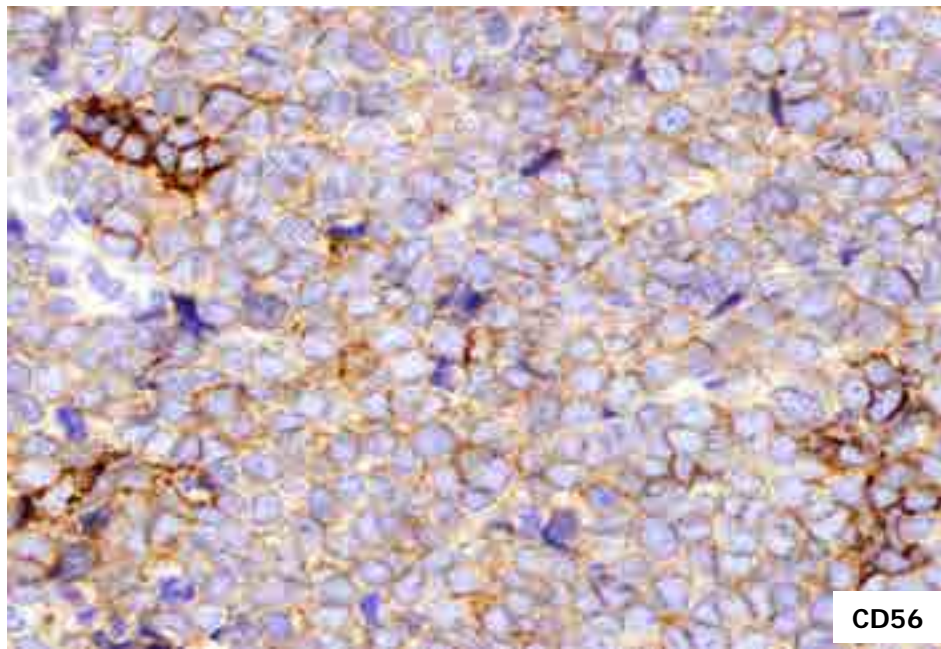
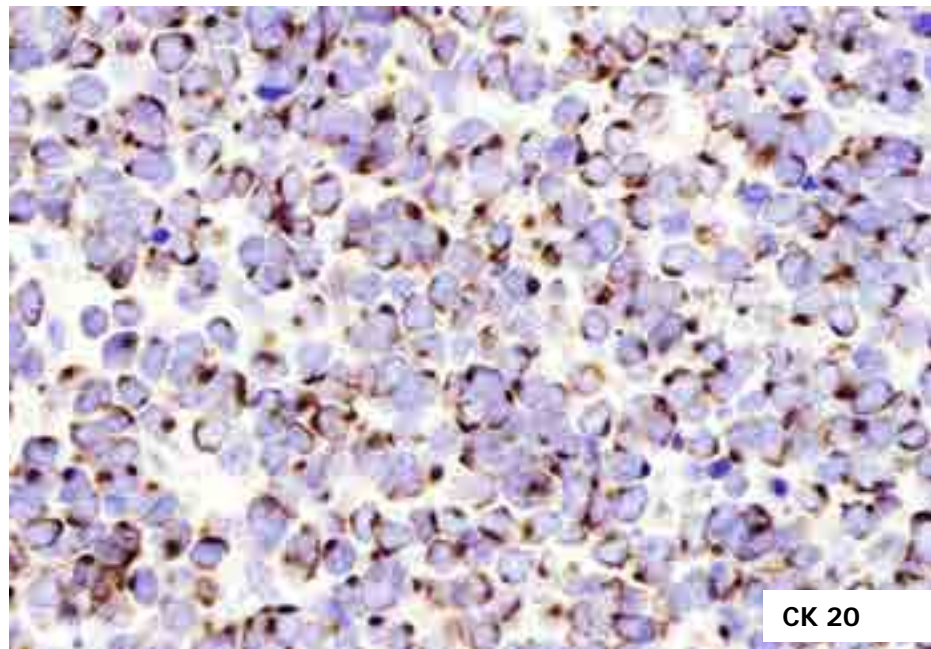






# CK7-/ CK20+

| Primario                       | Marcadores  |
|--------------------------------|---|
| Colon                          | CDX2 +<br>Villina +<br>SATB2+   |
| Intestino delgado              | CDX2 + **<br>Villina +/-<br>SATB2+ /-                                 |
| Carcinoma de células de Merkel | CK20 + paranuclear<br>CD56 +<br>Cromogranina +/-<br>Sinaptofisina +/- |

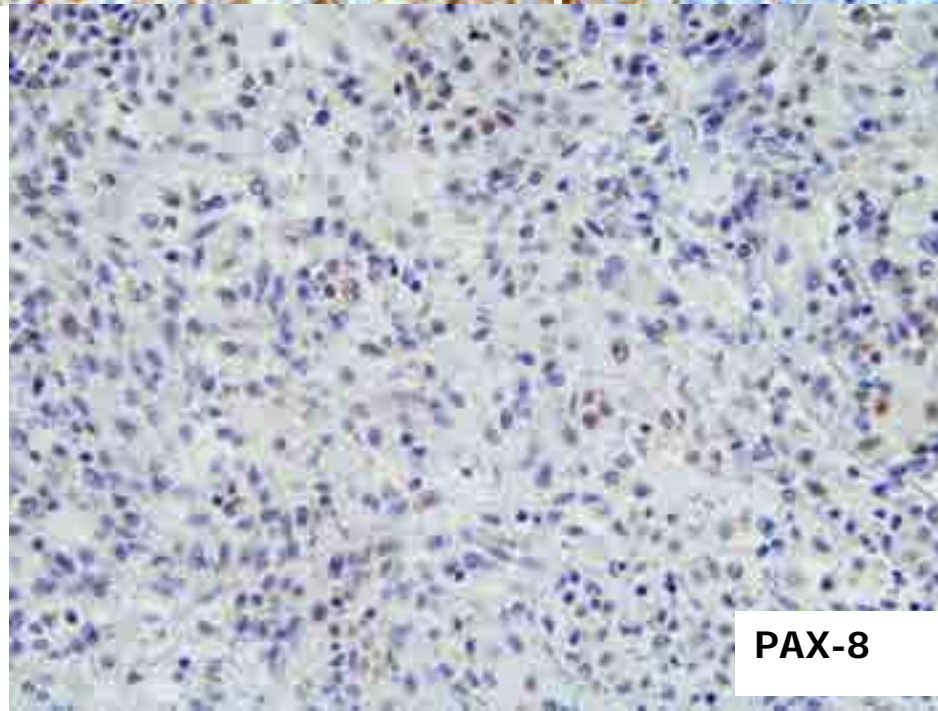
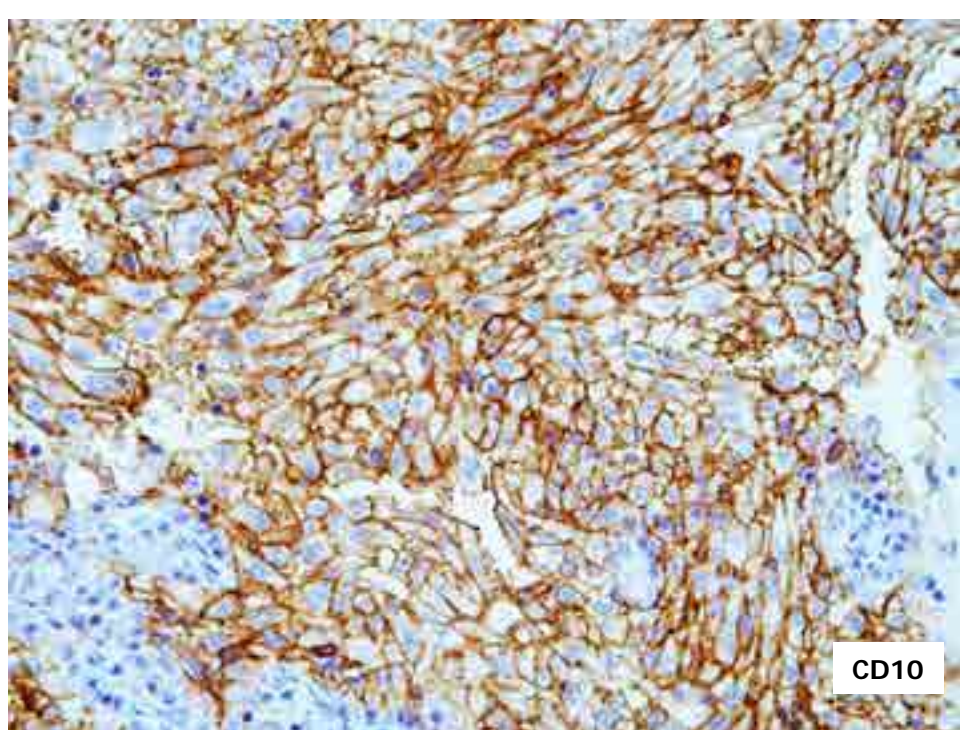
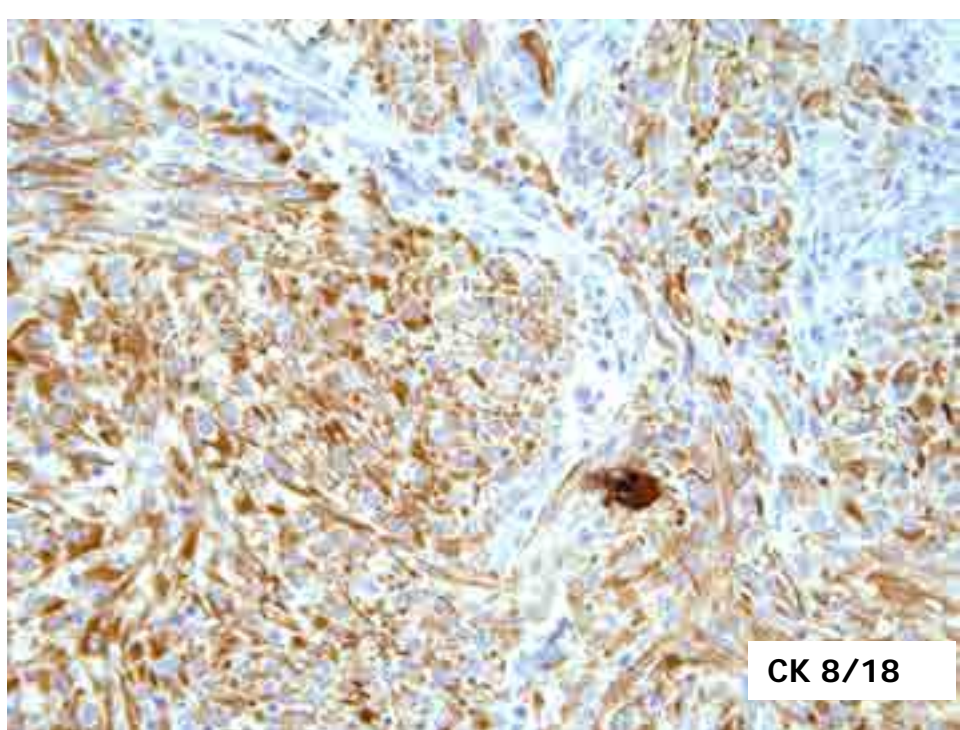


| <b>Primario</b>                          | <b>Marcadores</b>  |
|--|--|
| <b>Adenocarcinoma estómago/esófago</b>   | <b>CDX2-/+<br/>Villina +p/-<br/>SATB2 -</b>                    |
| <b>Páncreas</b>                          | <b>CDX2+/-<br/>Villina +p/-<br/>CK17 o CK19 +/-<br/>MUC4 +</b> |
| <b>Carcinoma urotelial</b>               | <b>GATA 3 +<br/>CK5/6 +<br/>p40/p63 +</b>                      |
| <b>Adenocarcinoma mucinoso de pulmón</b> | <b>TTF1-/+<br/>Napsin A +/-<br/>CDX2 +/-</b>                   |

# CK7- / CK20-

| <b>Primario</b>                          | <b>Marcadores</b>  |
|--|--|
| <b>Neuroendocrino</b>                    | <b>CK8/18+</b><br><b>CD56 +</b><br><b>Cromogranina/Sinaptofisi</b><br><b>na +</b><br><b>TTF-1 + (5%)</b><br><b>MASH-1+</b> |
| <b>Carcinoma renal de células claras</b> | <b>CK8/18+</b><br><b>PAX8 +</b><br><b>CD10 +</b><br><b>Ag. RCC +</b>   |
| <b>Carcinoma Hepatocelular</b>           | <b>Arginasa1 +</b><br><b>HepPar1 +</b><br><b>Glipican3 +</b>   |

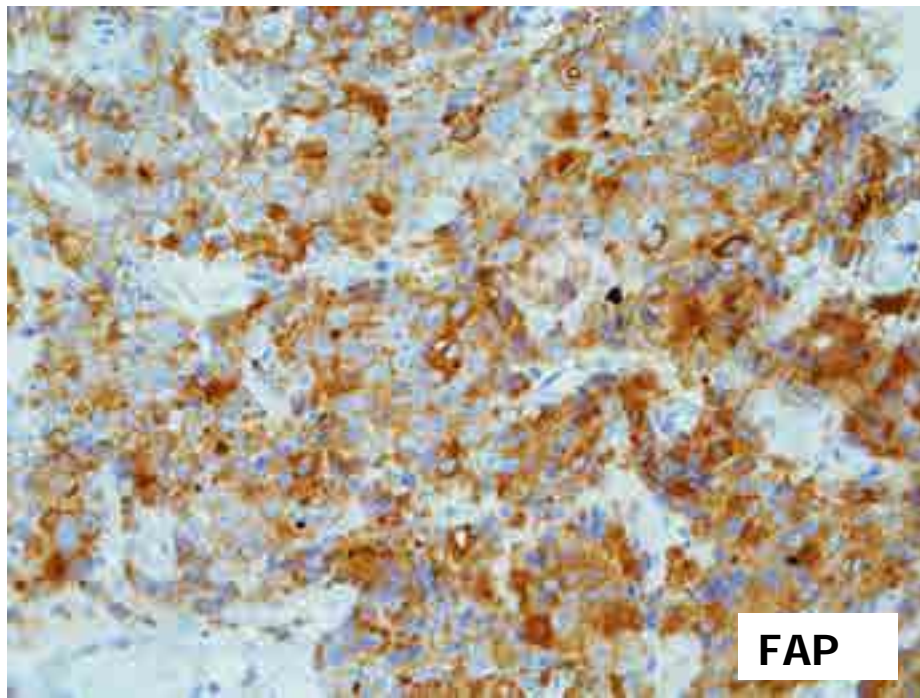
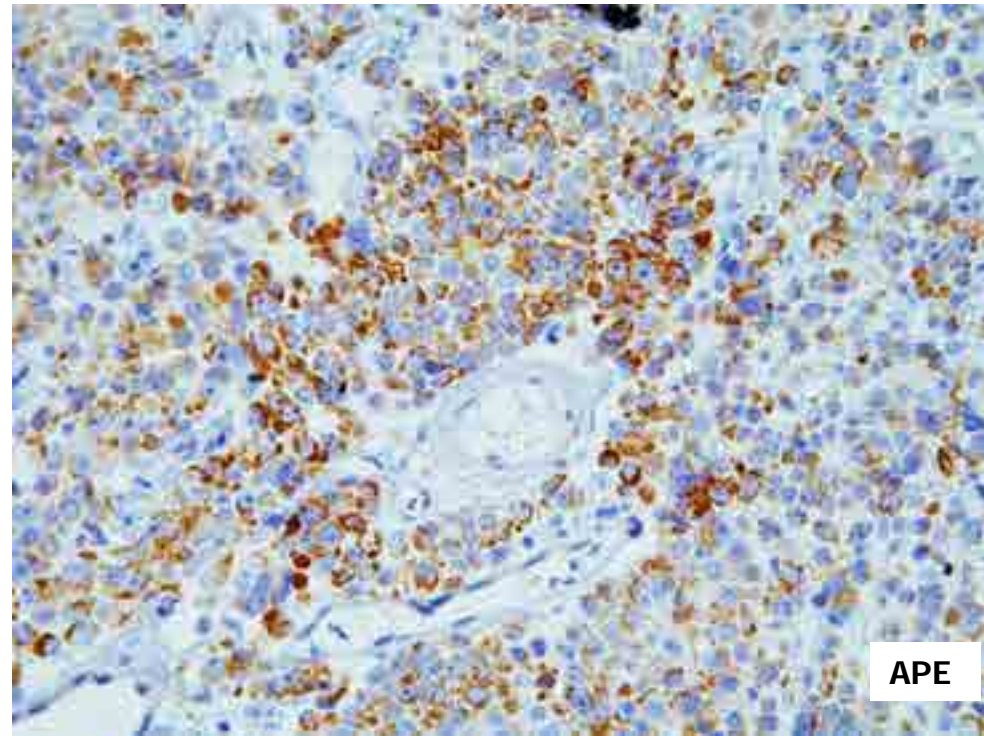
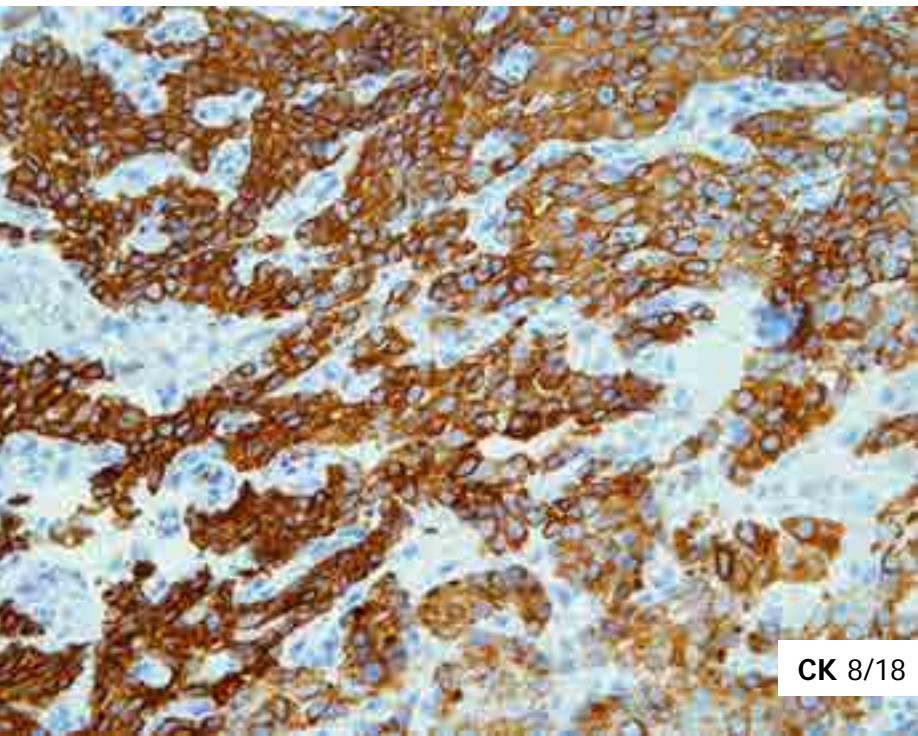




# CK7- / CK20-

| Primario                 | Marcadores  |
|--------------------------|---|
| <b>Corteza Adrenal</b>   | <b>MART-1 +<br/>Calretitina +<br/>Inhibina +<br/>SF-1 +</b> |
| <b>Próstata</b>          | <b>APE +<br/>NKX3.1 +<br/>P504s +</b>                       |
| <b>Células escamosas</b> | <b>CK5/6 +<br/>P63/p40 +</b>                                |







# **CANON DEL SUMIDERO CHIAPAS**

