



SOCIETAT CATALANA

D'ANATOMIA PATOLÒGICA

SESIÓN RESIDENTES: “UROPATHOLOGÍA”

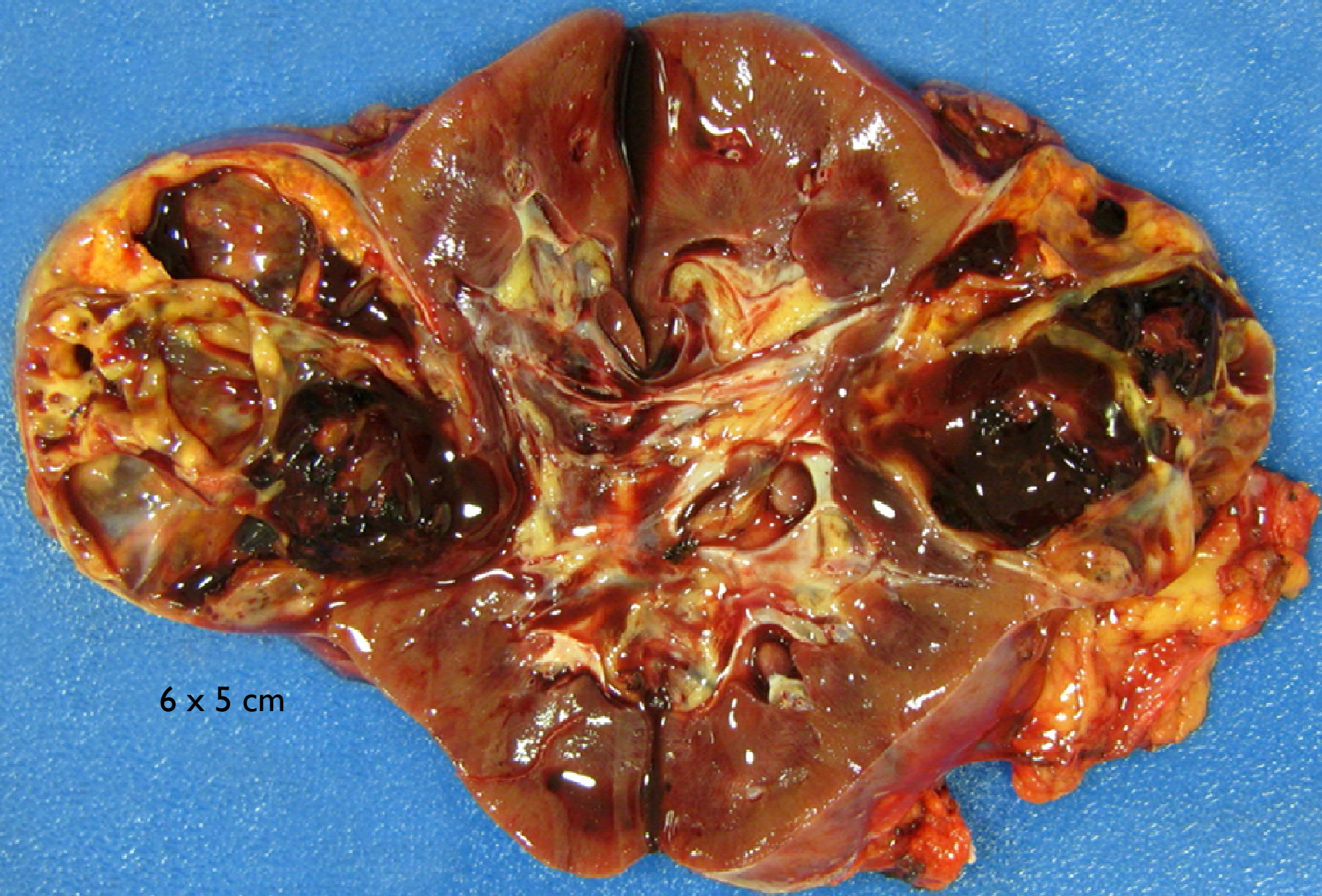
Carmen Amalia Vásquez Dongo

Servicio Anatomía Patológica

Historia Clínica

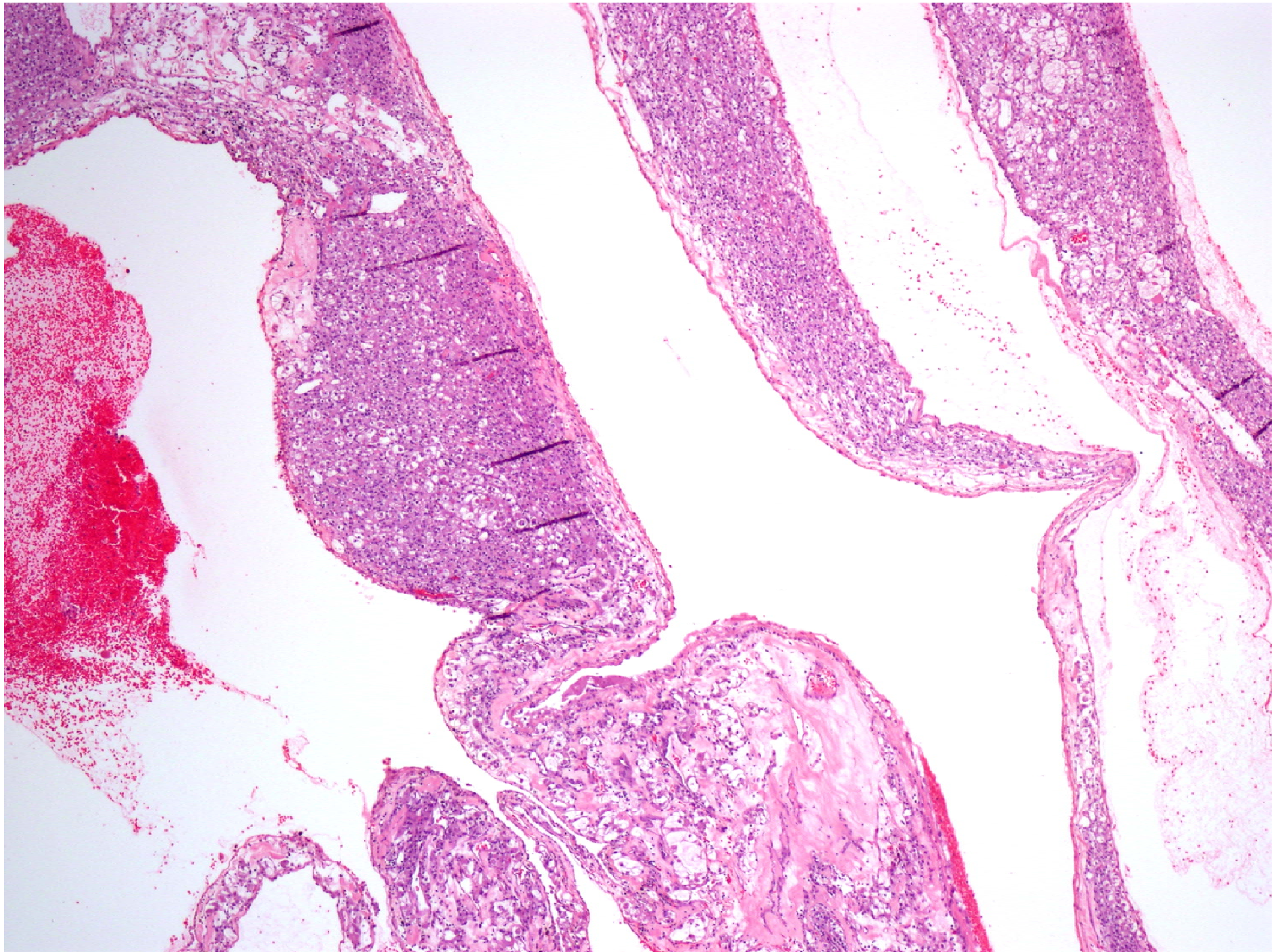
- ▶ Paciente mujer de 36 años
- ▶ Antecedente:
 - Mastectomía izquierda por carcinoma ductal.
- ▶ En el 2012, en estudio de seguimiento:

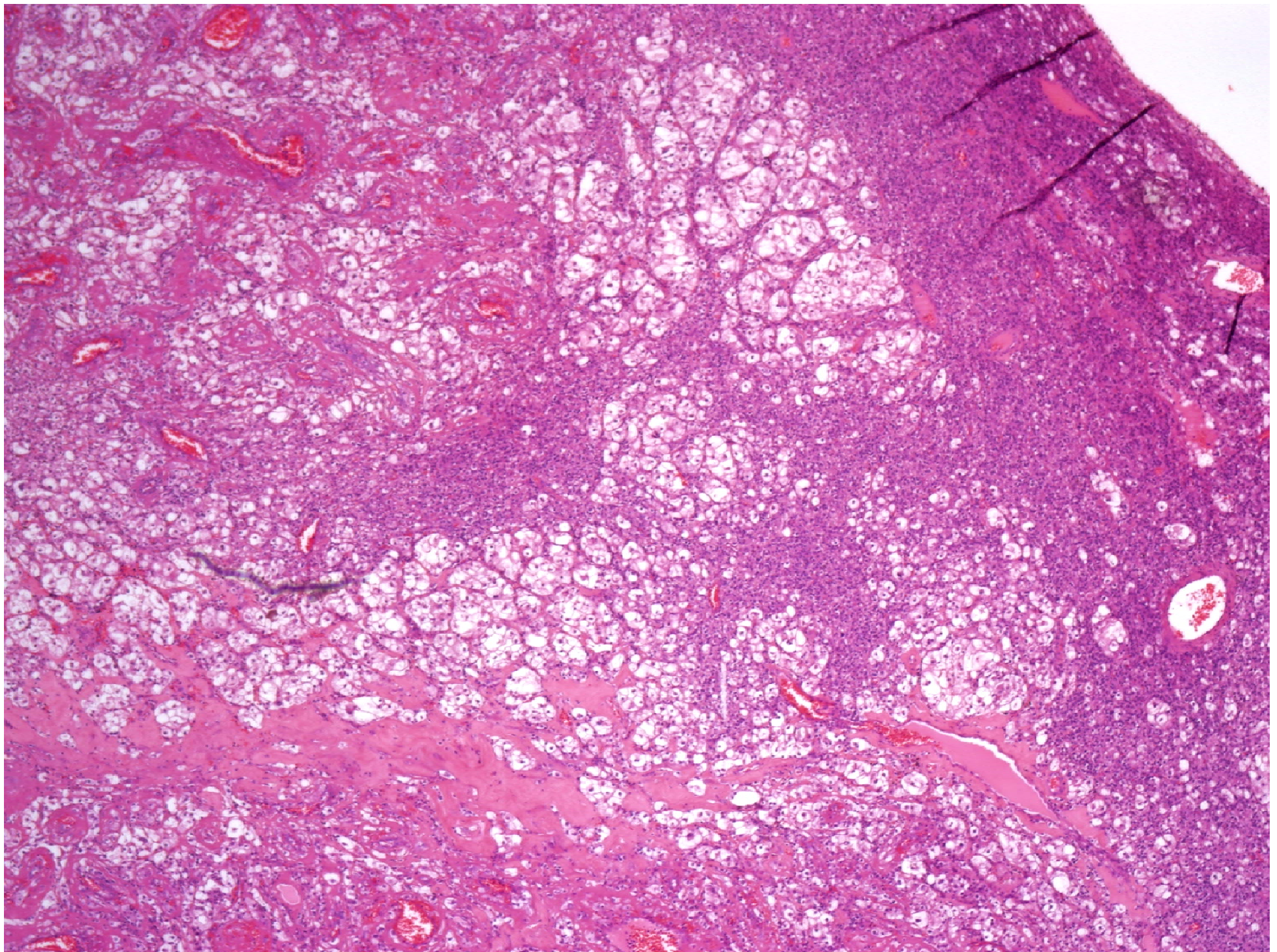


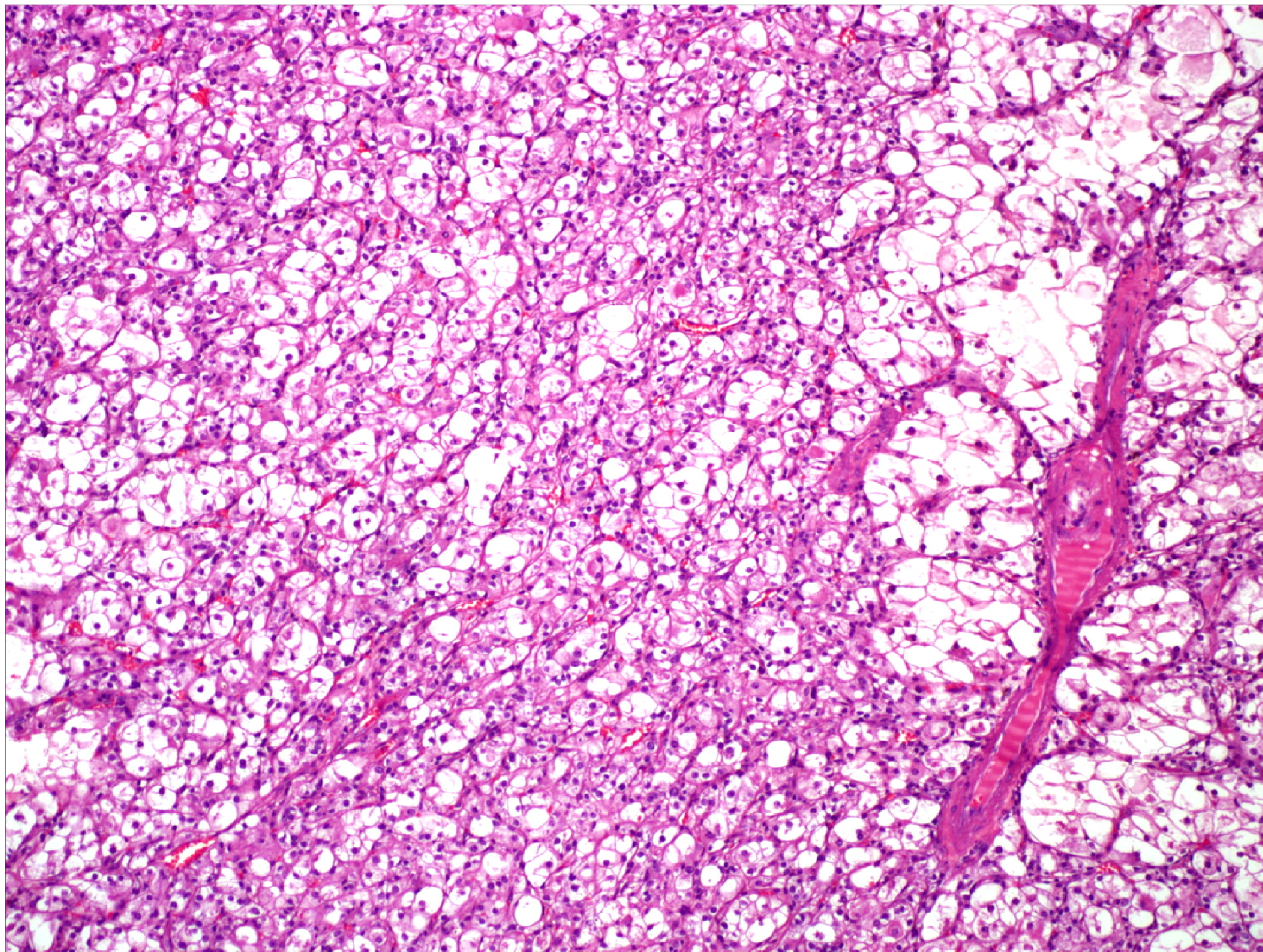


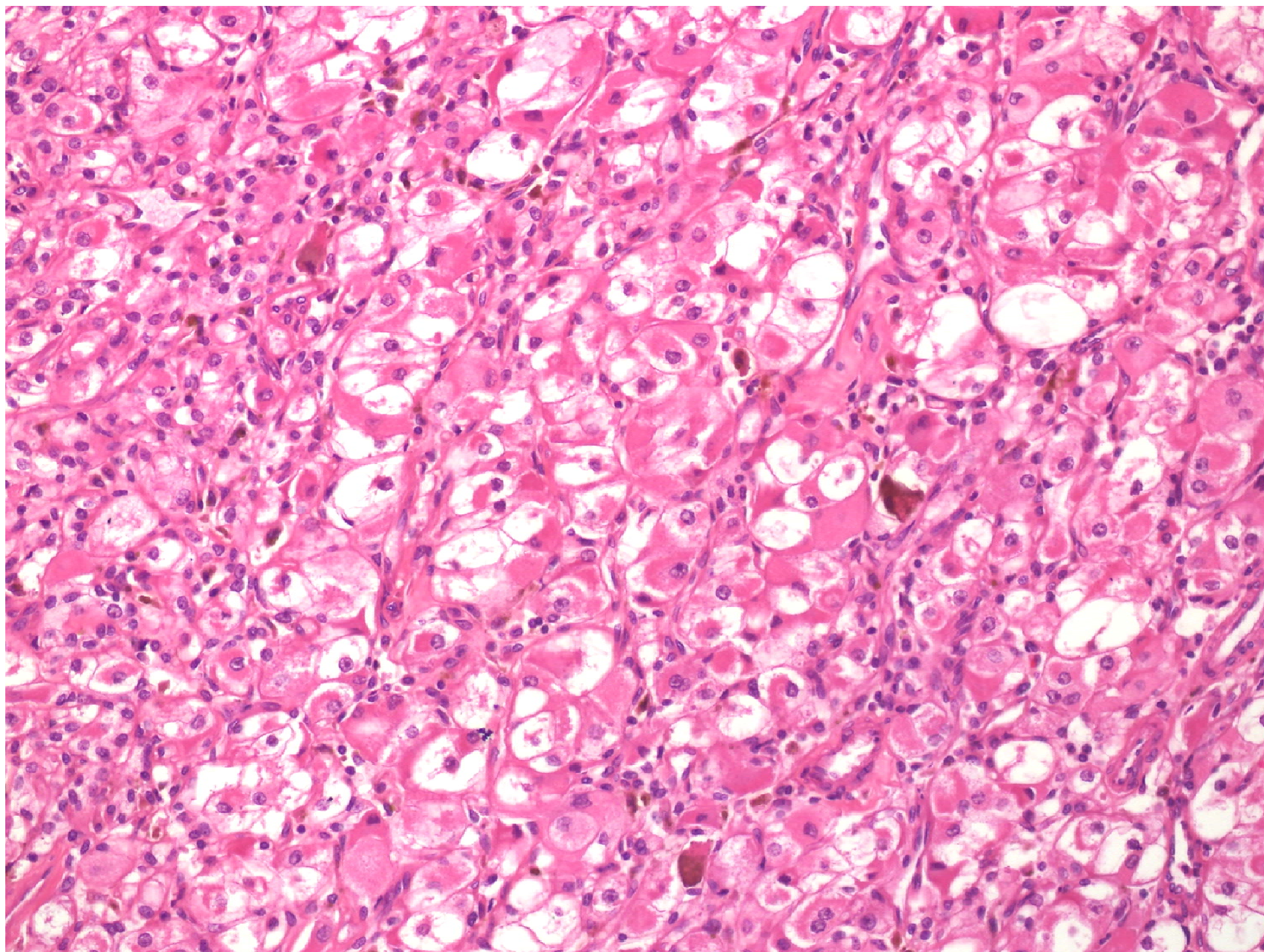
6 x 5 cm

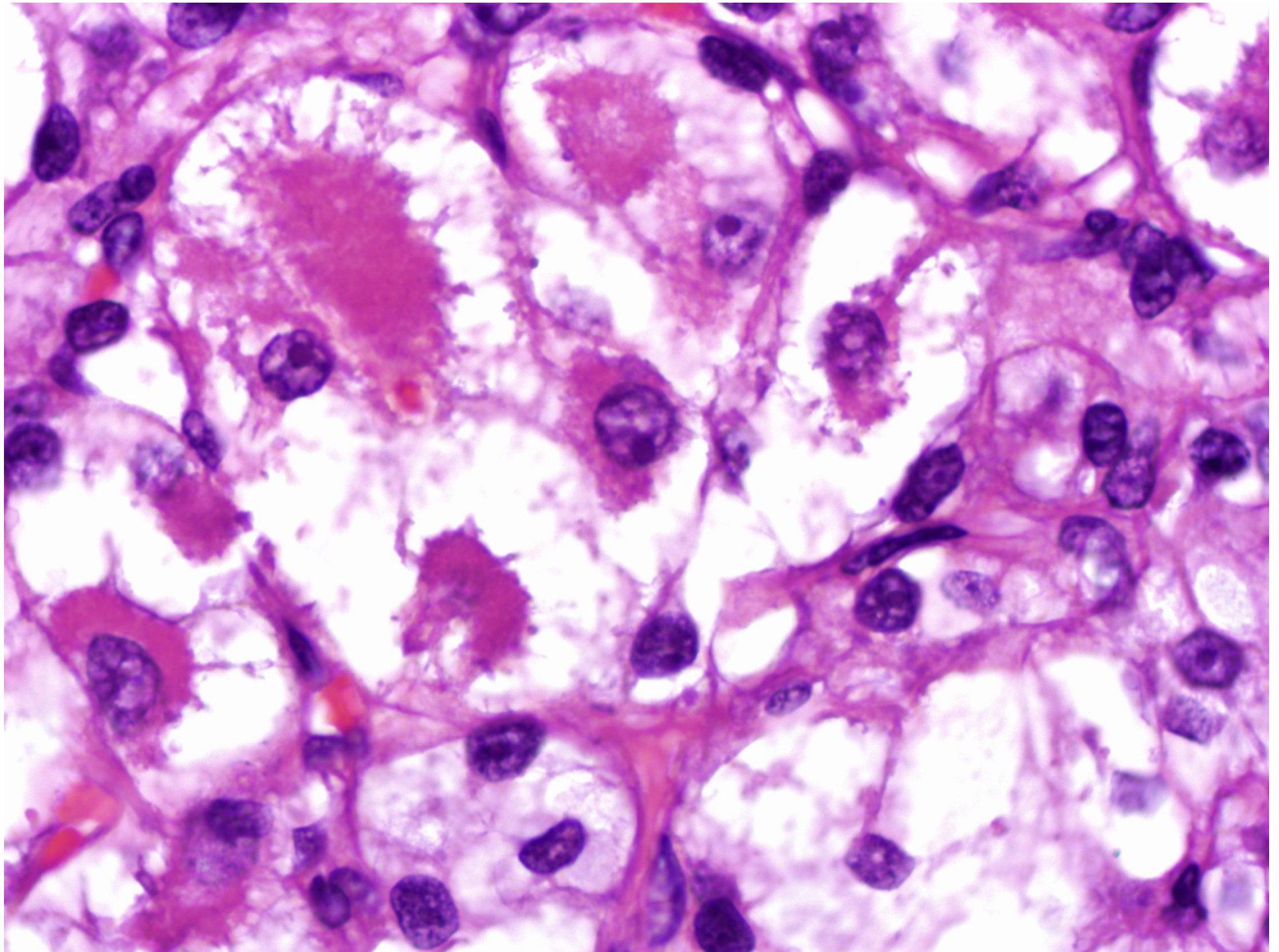


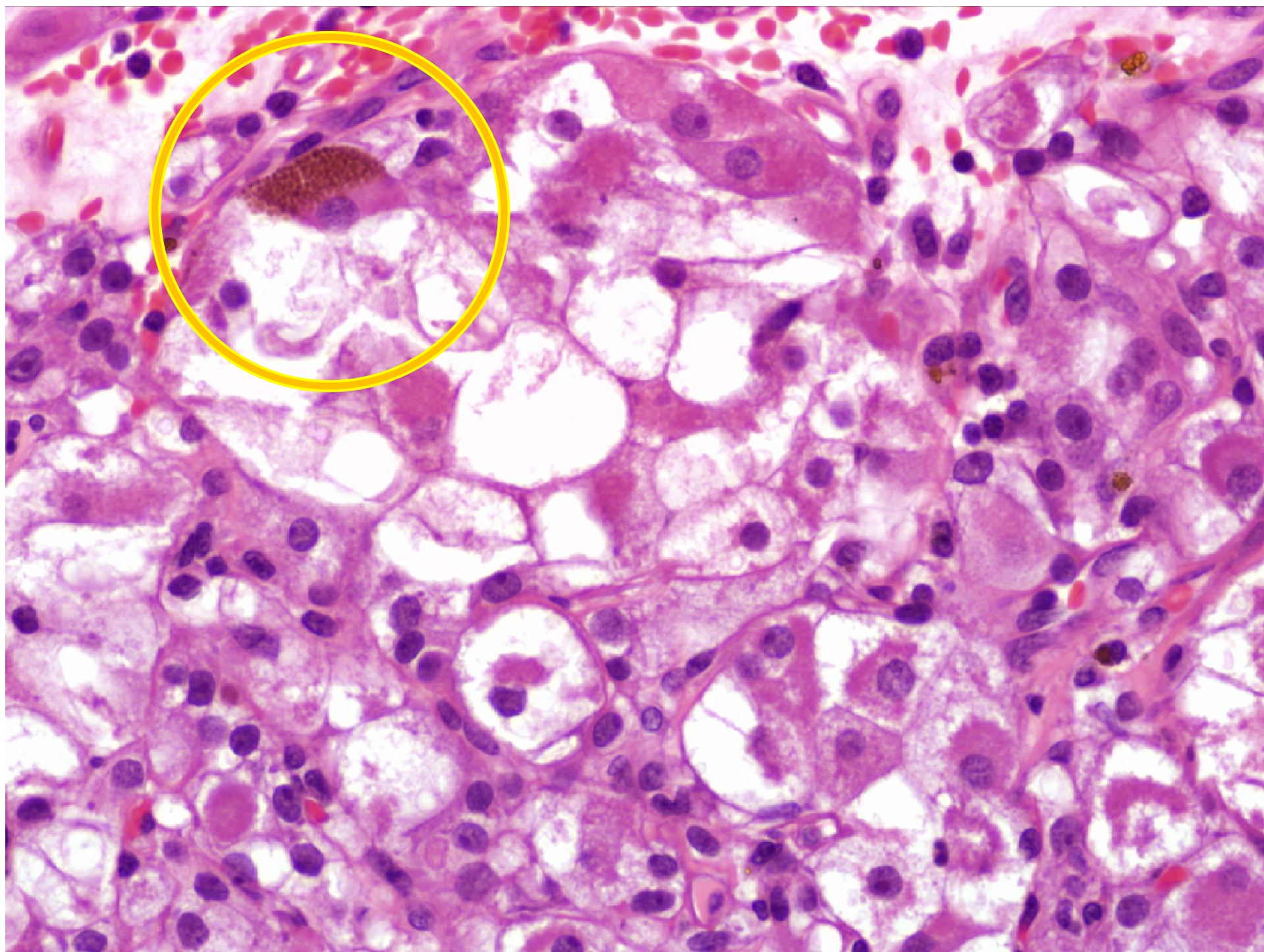


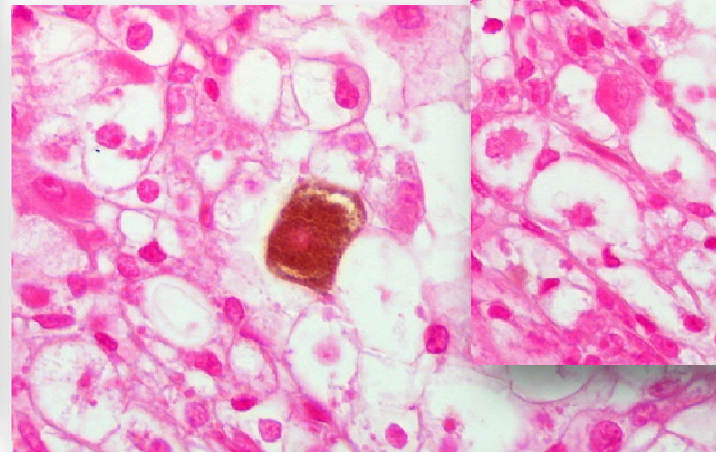
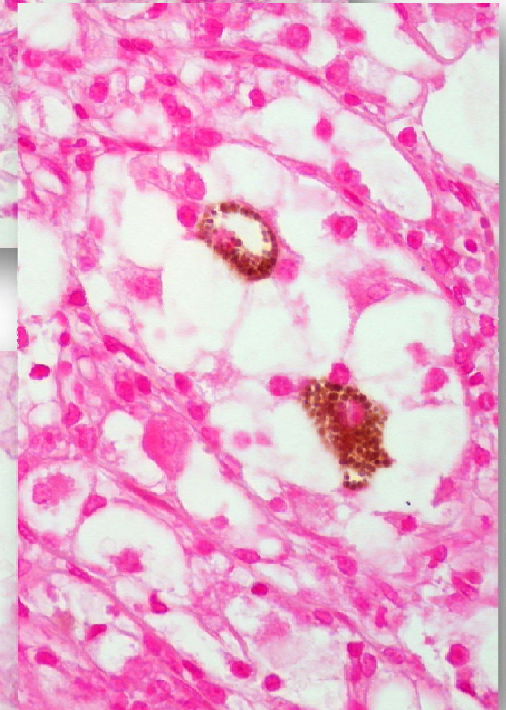
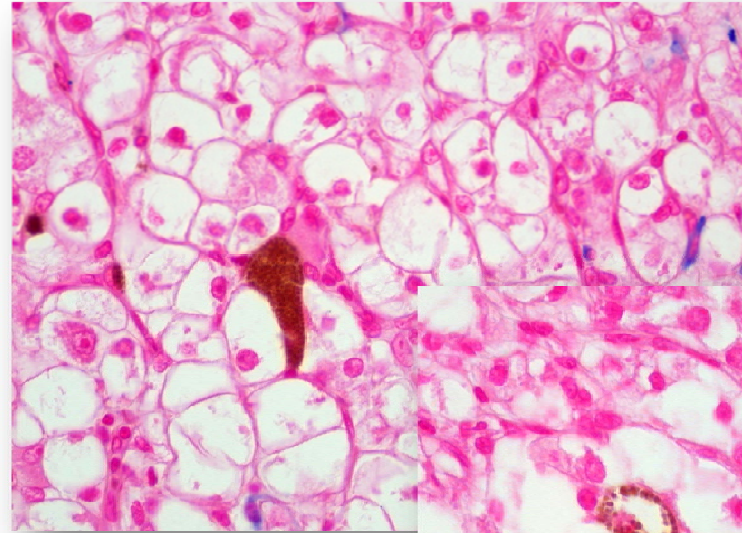
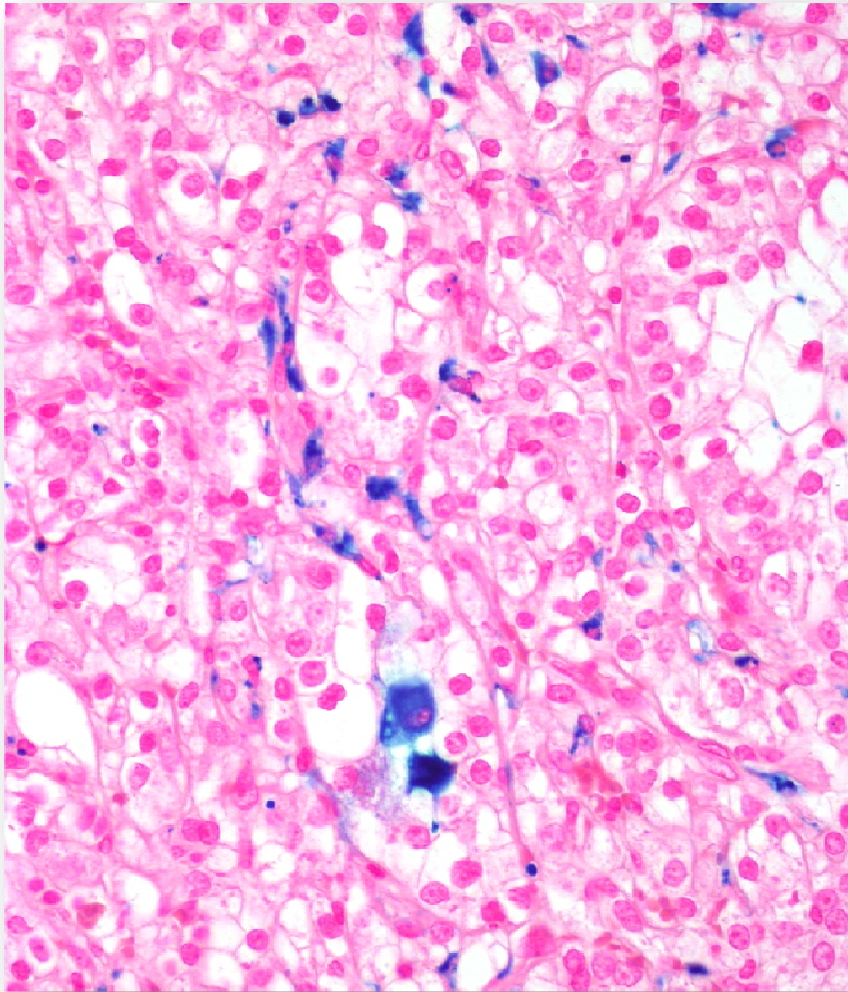






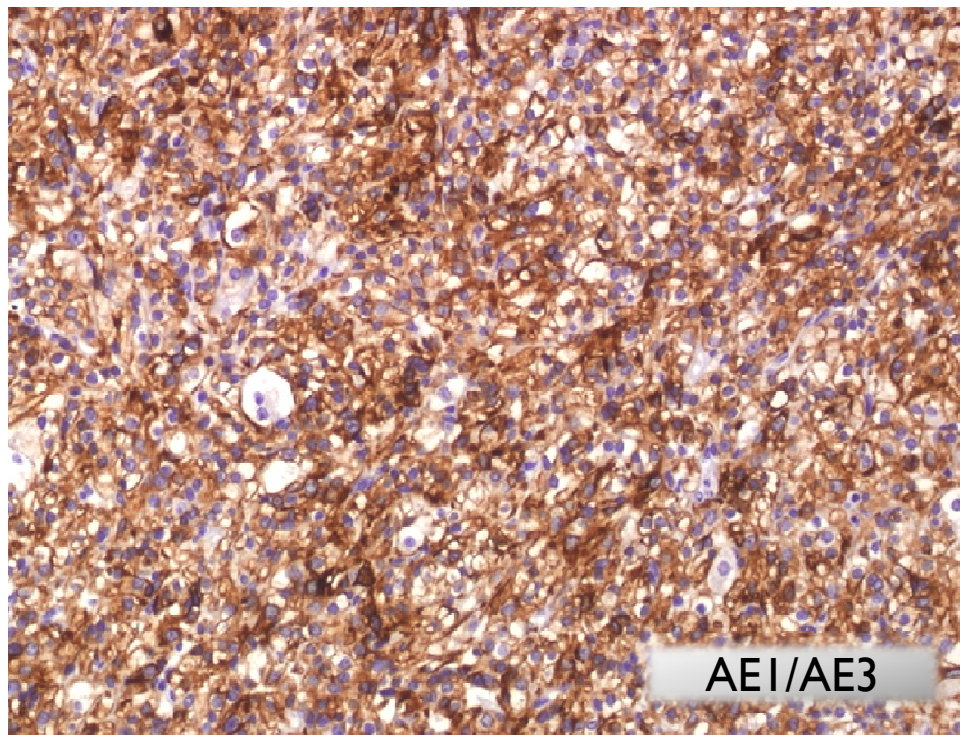




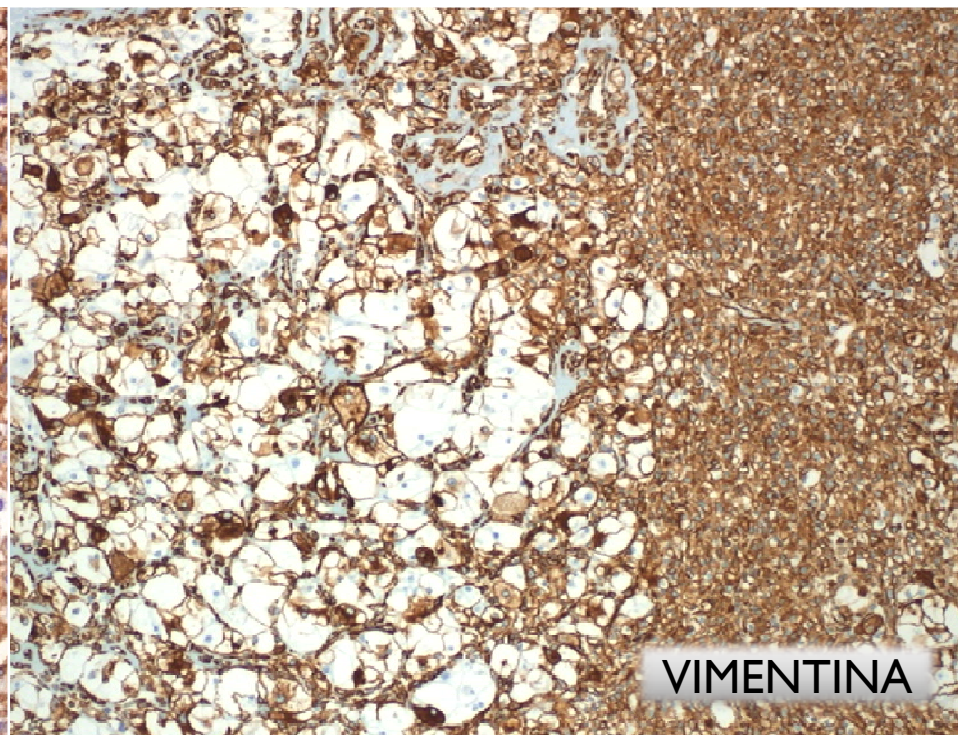


PERLS

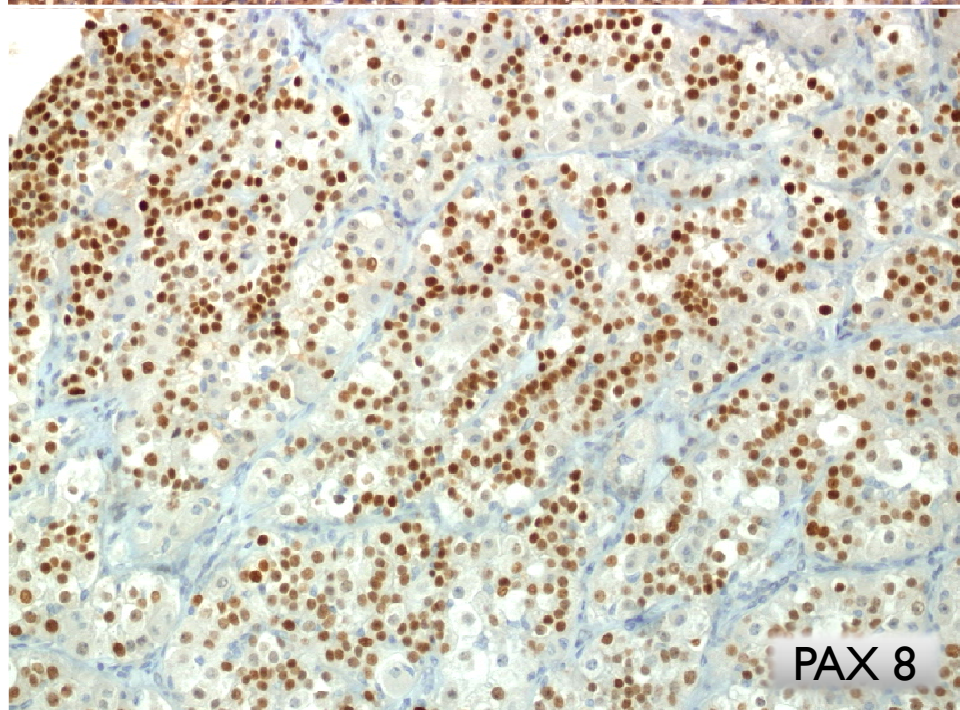




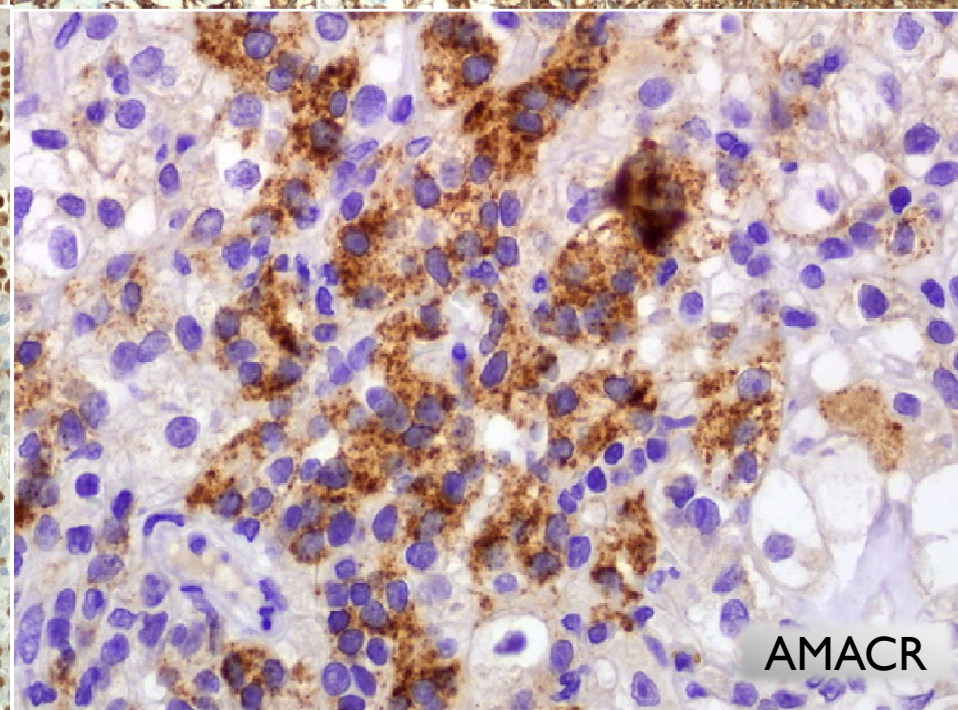
AE1/AE3



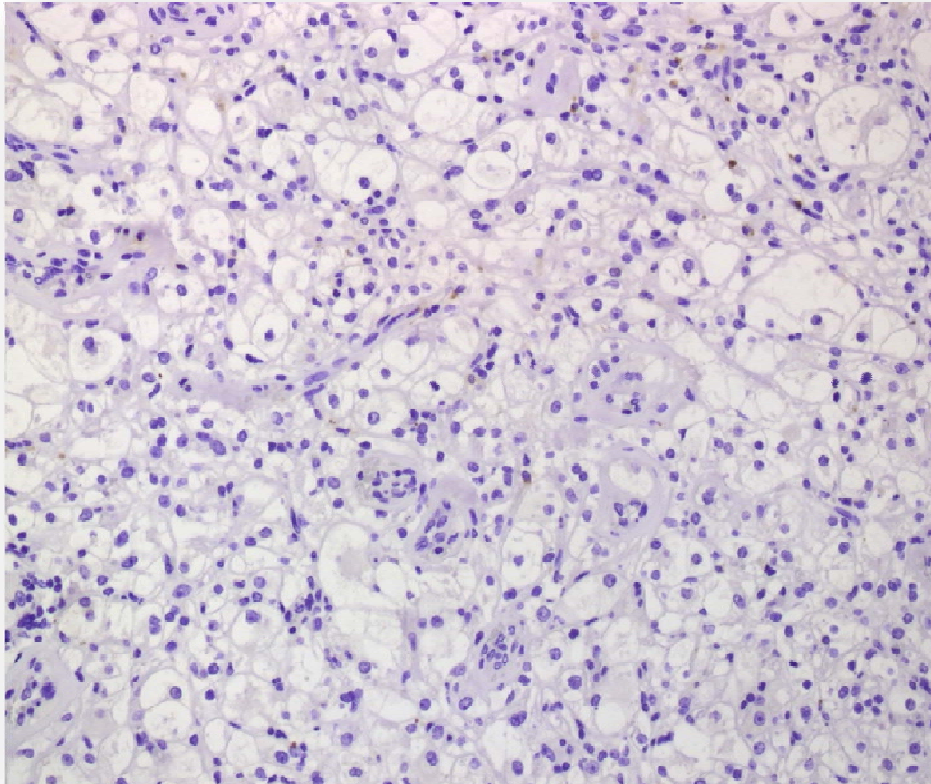
VIMENTINA



PAX 8



AMACR



CD 10

CK7

EMA

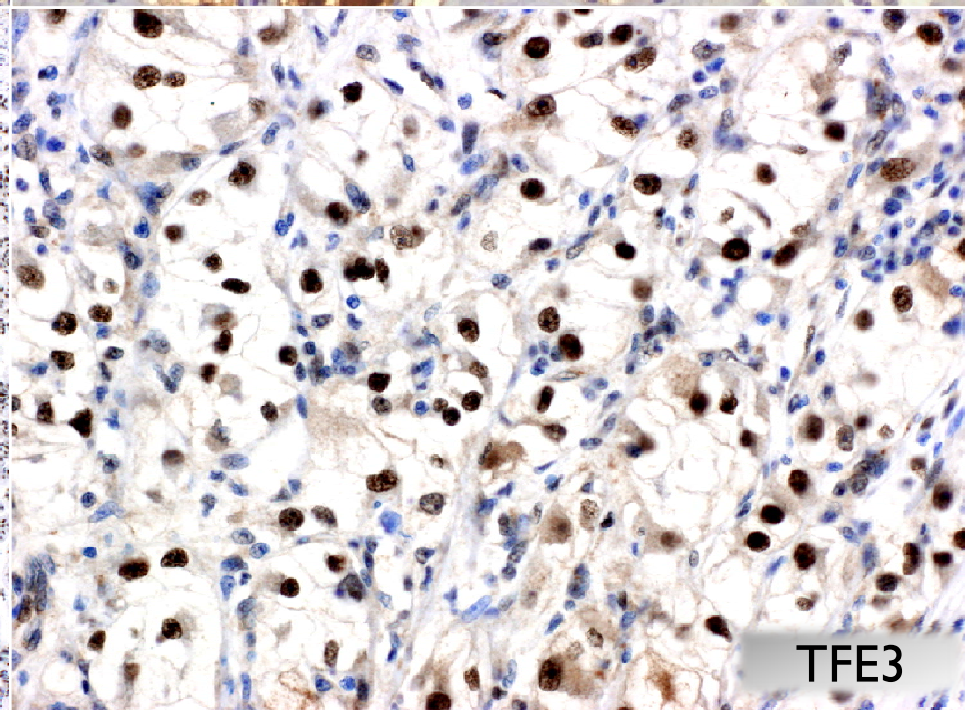
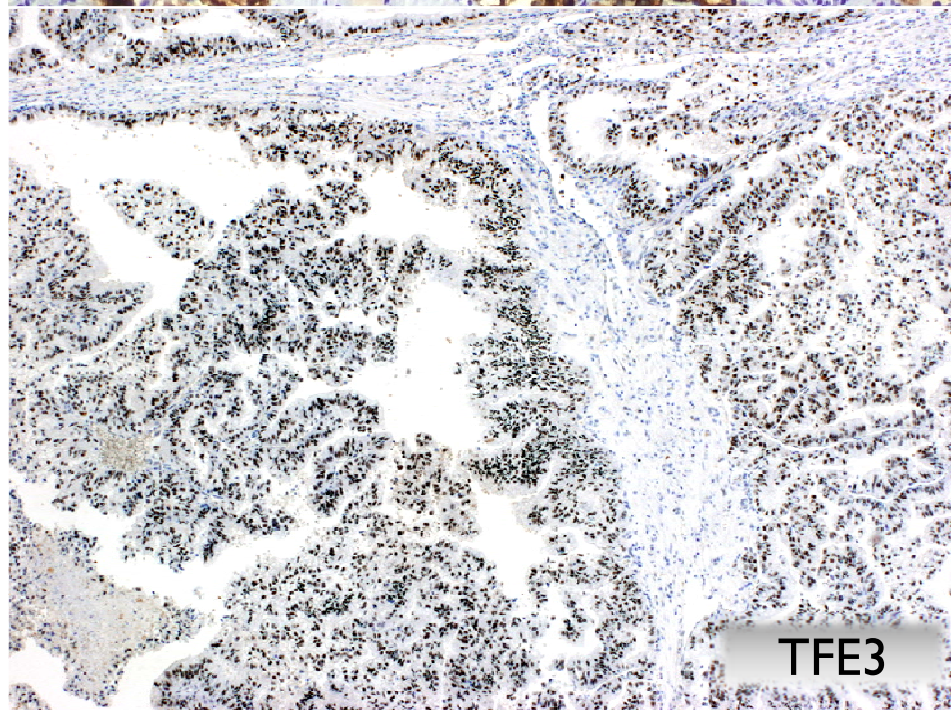
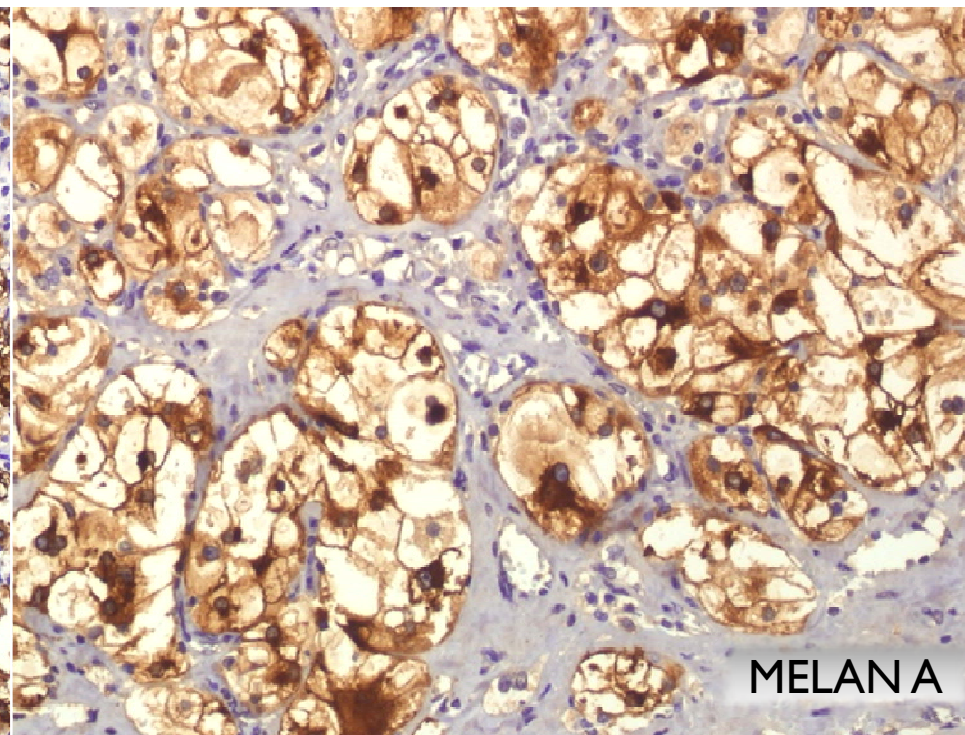
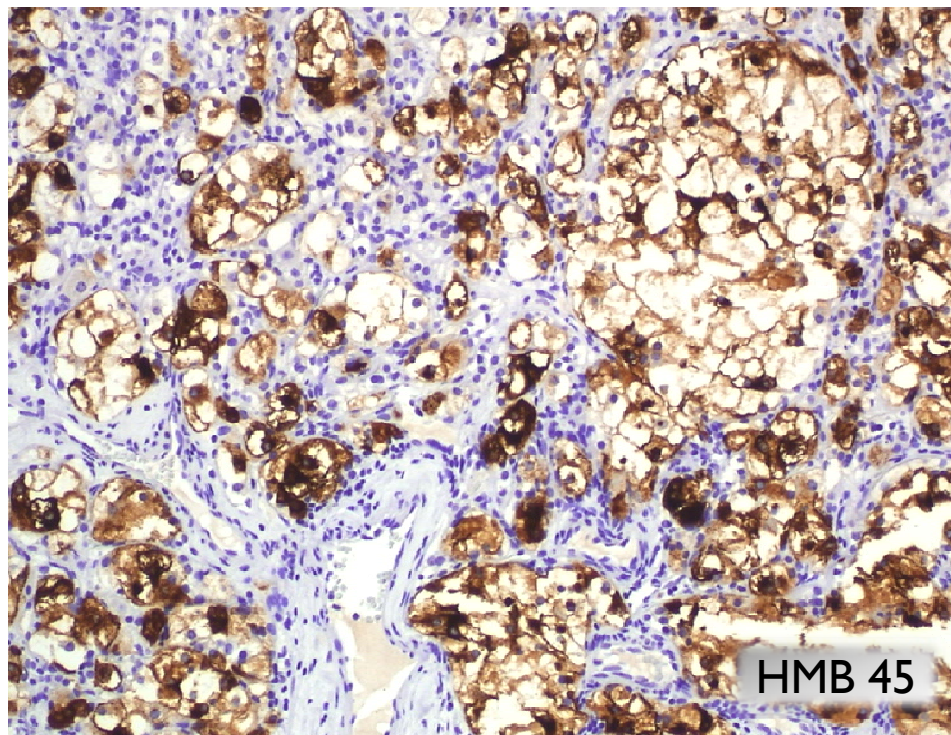
DESMINA

AML

SI00

CD68





DIAGNÓSTICO

**Carcinoma Renal con
Traslocación Xp.11
Melanótico**



Melanotic Xp11 Translocation Renal Cancers

A Distinctive Neoplasm With Overlapping Features of PEComa, Carcinoma, and Melanoma

Pedram Argani, MD,† Sebastian Aulmann, MD,‡ Zarir Karanjawala, MD, PhD,*
Robert B. Fraser, MD,§ Marc Ladanyi, MD,|| and Maria M. Rodriguez, MD¶*

Am J Surg Pathol 2009;33 (4); 609-619

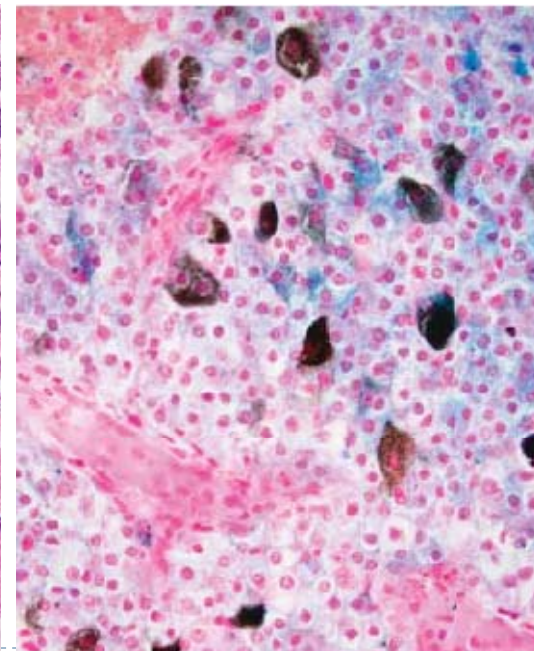
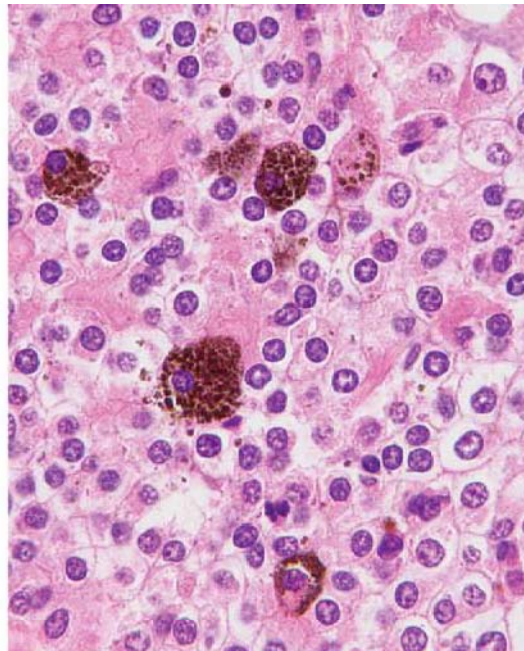
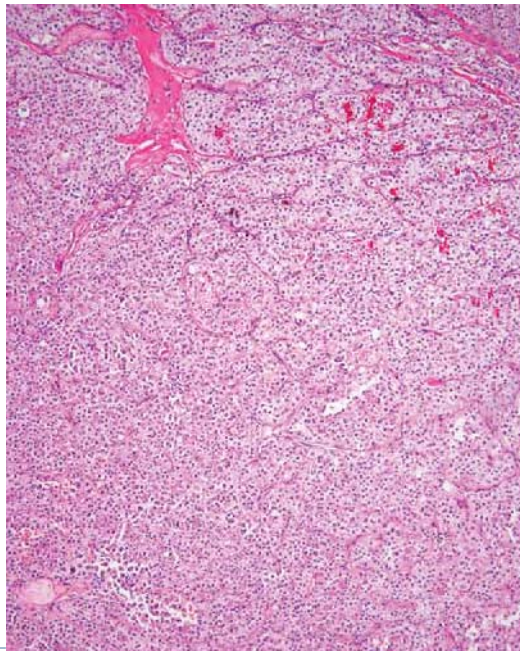


TABLE 2. Possible Additional Examples of Melanotic Xp11 Translocation Renal Cancer in the Literature

Author	Author's Description of Lesion	Age/Sex	Morphology	IHC/EM	Outcome
Davis et al ²⁰	Melanotic clear cell neoplasms of the kidney	5 cases; 11-42 y; 4F, 1M	"alveolar growth pattern...abundant clear cytoplasm...scattered throughout are melanin-rich cells"	HMB45+, melanin A+; epithelial differentiation "much less than expected" in RCC; smooth muscle differentiation "not demonstrable"	"Malignant potential has not been demonstrated to date"
Adachi et al ¹	Melanotic perivascular epithelioid clear cell tumor of the kidney	71-y-old F	"rich in vasculature and exclusively composed of epithelioid clear cells"	HMB45+; CK-, EMA-, RCC marker-, actin-, MITF-	NED 6.33 y
Goyal et al ²⁹	Melanotic clear cell epithelioid angiomyolipoma	22-y-old F	"sheets and nests with some intervening thin fibrovascular septa...the cells were polygonal, had abundant clear cytoplasm...many tumor cells showed coarse granular brown cytoplasmic melanin"	HMB45+; CK-, actin-, S100-; EM shows melanosomes but no cell junctions	NED 5 mo
Ribalta et al ⁴⁴	Malignant pigmented clear cell epithelioid tumor of the kidney	73-y-old F	"polygonal clear cells in nests and cords, with a prominent capillary network between them...some cells contain intracytoplasmic brown pigment"	HMB45+, S100+, SMA focal+, CK-, EMA-, MSA-; EM shows melanosomes but no cell junctions	DOD 5 y
Saito et al ⁴⁸	Clear cell variant of epithelioid angiomyolipoma	23-y-old F	"clear cells with scattered sarcomatoid features, and some cells contained intracytoplasmic brown pigment"	HMB45+, EMA-, CK-, S100-, Vimentin-; EM shows melanosomes	DOD 1 y
Lei et al ³⁸	Pigmented renal cell carcinoma with melanocytic differentiation	26-y-old F	"clear cells and a small proportion of eosinophilic cells...4 different patterns: solid, papillary, tubular, acinar...dark brown pigment was observed in the cytoplasm of the clear cells"	HMB45+, CK-, S100-	Presented with mediastinal metastases: AWD 15 mo
Sironi et al ⁴⁹	Oncocytic angiomyolipoma	29-y-old F	"densely packed nests and sheets of large polygonal cells, intermingled with a smaller cell population with scantier cytoplasm...large globules of an acellular, afibrillary densely eosinophilic material...scattered pigmented cells and foci of dystrophic calcifications"	HMB45+; actin focal+; CK-, Vimentin-, EMA-	NED 10 y
Ehara et al ²³	Clear cell melanoma of the renal pelvis	3-y-old F	"solid tumor composed of clear cells with focal pigmentation in the renal pelvis"	HMB45+	NED 13 mo

TABLE 4. Melanocytic Differentiation in MITF/TFE-related Lesions

Neoplasm	Characteristic Genetic Alteration	Extent of Melanocytic Differentiation		
		HMB45/Melan A IHC	Melanin Production	Putative “Cell of Origin”
ASPS	<i>ASPL-TFE3</i> fusion	–	–	?
Xp11 RCC	Various <i>TFE3</i> fusions	Rare cases +	–	Renal tubular cell precursor
t(6;11) RCC	<i>Alpha-TFEB</i> fusion	+	–	Renal tubular cell precursor
PEComa	Most cases MiTF +; rare cases TFE3 + by IHC	+	Usually –; rare cases reported +	?
Melanotic Xp11 renal cancers	<i>TFE3</i> fusions	+	+	?
Melanoma	MiTF expression and amplification	+	+	Melanocyte precursor
Clear cell sarcoma of tendon sheath	<i>EWS-ATF1</i> fusion activates MiTF expression	+	+	?

ASPS indicates alveolar soft part sarcoma; IHC, immunohistochemistry; PEComa, perivascular epithelioid cell neoplasm; RCC, renal cell carcinoma.

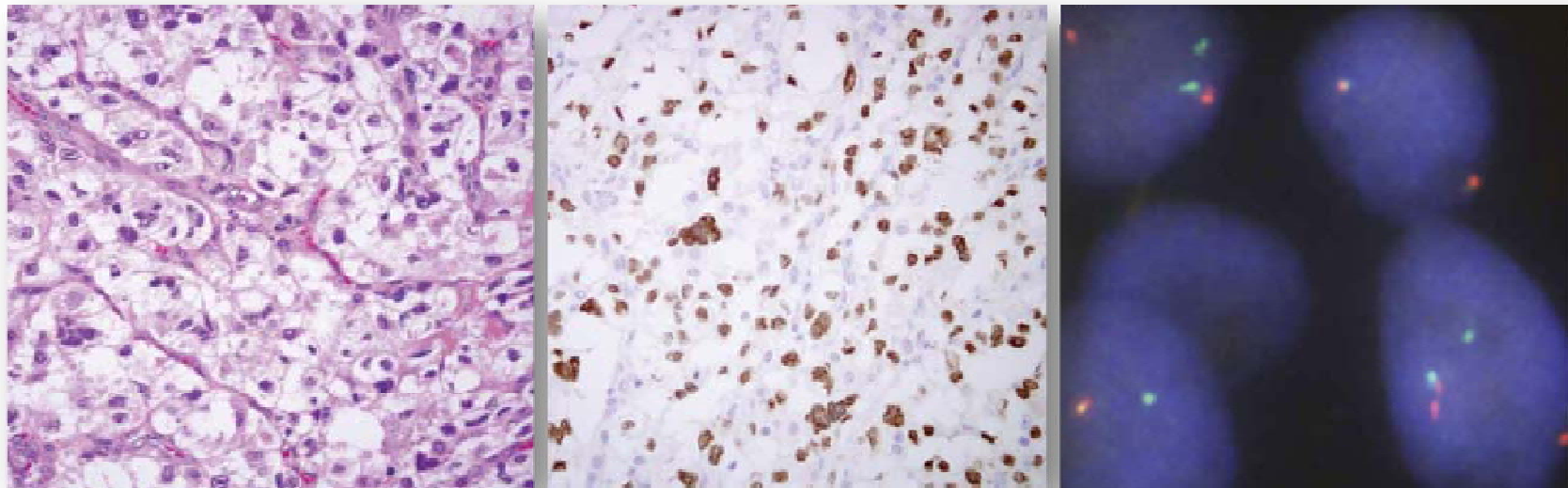
TABLE 2. Comparative Features of Melanotic Xp11.2 Neoplasms and Conventional PEComas

	Melanotic Xp11.2 Neoplasm	PEComa
Site	Predominantly kidney to date	Gynecologic tract, intra- abdominal, reported in soft tissue, viscera, cutaneous, and bone
Demographics	Adolescence to young adult No clear sex predilection	Middle age, but may affect children and older adults Female >> male
Histology	Epithelioid with clear cytoplasm	Spindled, epithelioid, or sclerosing
Myoid marker expression	Absent	Usually present
Melanin pigment	Present	Usually absent
Xp11 translocation	Present	Rare

A Distinctive Subset of PEComas Harbors *TFE3* Gene Fusions

Pedram Argani, MD, Sebastian Aulmann, MD,† Peter B. Illei, MD,* George J. Netto, MD,*
Jae Ro, MD,‡ Hyun-yea Cho, MD,§ Snjezana Dogan, MD,|| Marc Ladanyi, MD,||
Guido Martignoni, MD,¶ John R. Goldblum, MD,# and Sharon W. Weiss, MD ***

(Am J Surg Pathol 2010;34:1395–1406)



***TFE3* gene fusions in human tumors**

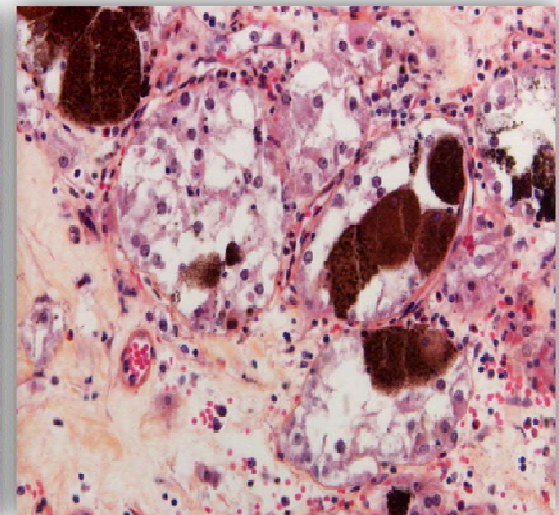
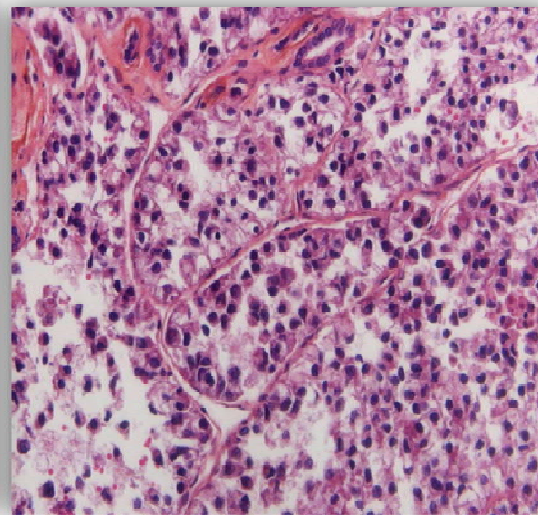
Fusion	Tumor	Age	Translocation
<i>ASPL-TFE3</i>	ASPS	5-40	der(17)t(X;17)(p11;q25)
<i>ASPL-TFE3</i>	Renal CA	2-68	t(X;17)(p11;q25)
<i>PRCC-TFE3</i>	Renal CA	2-70	t(X;1)(p11.2;q12)
<i>PSF-TFE3</i>	Renal CA	5-68	t(X;1)(p11.2;p34)
<i>NonO-TFE3</i>	Renal CA	39	inv(X)(p11.2;q12)
<i>CLTC-TFE3</i>	Renal CA	14	t(X;17)(p11;q23)
<i>Alpha-TFEB</i>	Renal CA	10-42	t(6;11)(p21;q13)

“Translocation carcinomas of the kidney”

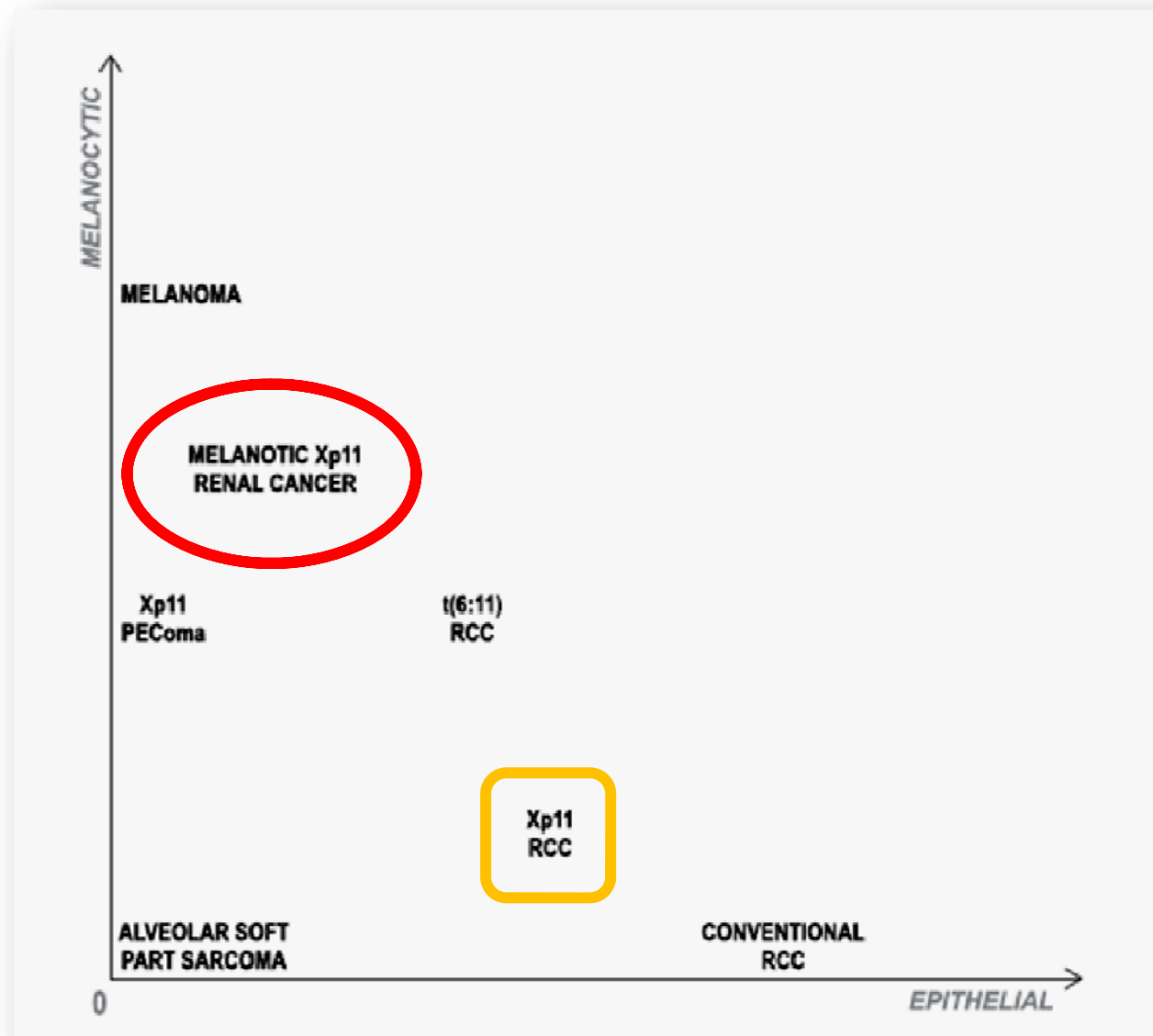
Melanotic Xp11 Translocation Renal Cancers: An Adult Case. Distinct Entity or Subentity?

Int J Surg Pathol. 2011
19(3):285-9

Justine Varinot, MD¹, Philippe Camparo, MD²,
Sylvain Beurtheret, MD¹, Eleodoro Barreda, MD¹,
Eva Compérat, MD-PhD¹



	Argani et al. 2009		Chang et al., 2009	Varinot et al., 2011
	H;11A	M;12A	M; 18	M; 30A
AE1/AE3	-	-	-	-
EMA	-	-	-	-
CAM 5.2	-	-		ND
VIMENTINA	ND	-	-	ND
CD 10	-	-	-	-
RCC	-	-		-
AMACR	ND	ND		-
E. Caderina	ND	ND		ND
S100	-	-	-	-
HMB 45	+	+	+	+
MELAN A	+	+	+	+
OTRAS	AML-, DESM- PAX8- PAX2-	AML-, DESM- PAX8- PAX2- CD99-; TIROSINASA+	AML-; DESM- cKIT- CD68- CK7-	AML-; DESM- PAX8- PAX2-
TFE3	+	+	+	+
TFB	ND	-	-	-
MiTF	-	-	-	-



A distinctive subset of PEComas harbors TFE3 gene fusions.

Argani et al., 2010

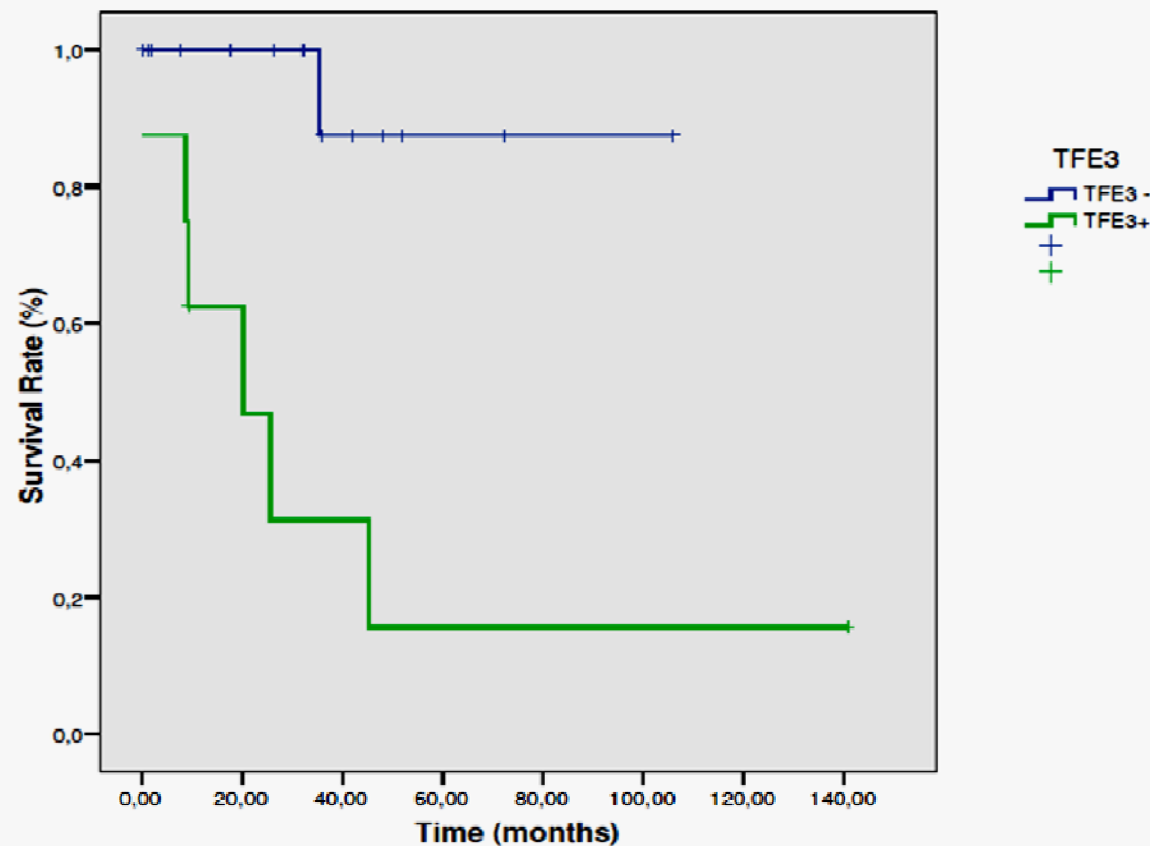
	Edad	Presentación	Tamaño tumoral	Seguimiento
Argani et al. 2009	11A	Masa renal, nódulos pulmonares, adenopatías mesentéricas y mediastinales	21,5 x 15,3 x 10,5 cm Multilobulado, con áreas pigmentadas marón oscuro o negruzcas	Ampliamente diseminada con metástasis Quimioterapia
	12A	Dolor en flanco, masa renal y adenopatías retroperitoneal y mesentérica masiva.	Biopsia en laparoscopia. Pigmentada y vascular	Fallece luego de 9 meses, a pesar de tto QT agresivo
Chang et al., 2009	18A	Dolor epigástrico, masa renal	9.6, x 6,5 x 4cm , con áreas pigmentadas marón oscuro o negruzcas	Nefroureterectomía con linfadenectomía. Buen estado luego de 3 meses de la I.Q
Varinot et al., 2011	30A	Astenia, parestesia del brazo izquierdo, masa renal con trombosis a vena cava y arteria pulmonar	12,5cm heterogéneo con áreas pigmentadas marón oscuro o negruzcas	Ampliamente diseminada con metástasis
Nuestro caso	36A	INCIDENTAL	6 x 5 cm, Multiquístico con , con áreas sólidas focalmente pigmentadas	Libre de enfermedad renal (14 m.)

Altered transcription factor E3 expression in unclassified adult renal cell carcinoma indicates adverse pathological features and poor outcome

Maria Carmen Mir*, Enrique Trilla*, Ines Maria de Torres*, Angel Panizo†, Alexander R. Zlotta§, Bas Van Rhijn§ and Juan Morote*

*Vall d'Hebron Hospital – Urology Department, Barcelona, †Clinica Universitaria Navarra – Pathology, Pamplona, Spain, and §Princess Margaret Hospital, University Health Network, University of Toronto – Department of Surgical Oncology, Division of Urology, Toronto, ON, Canada

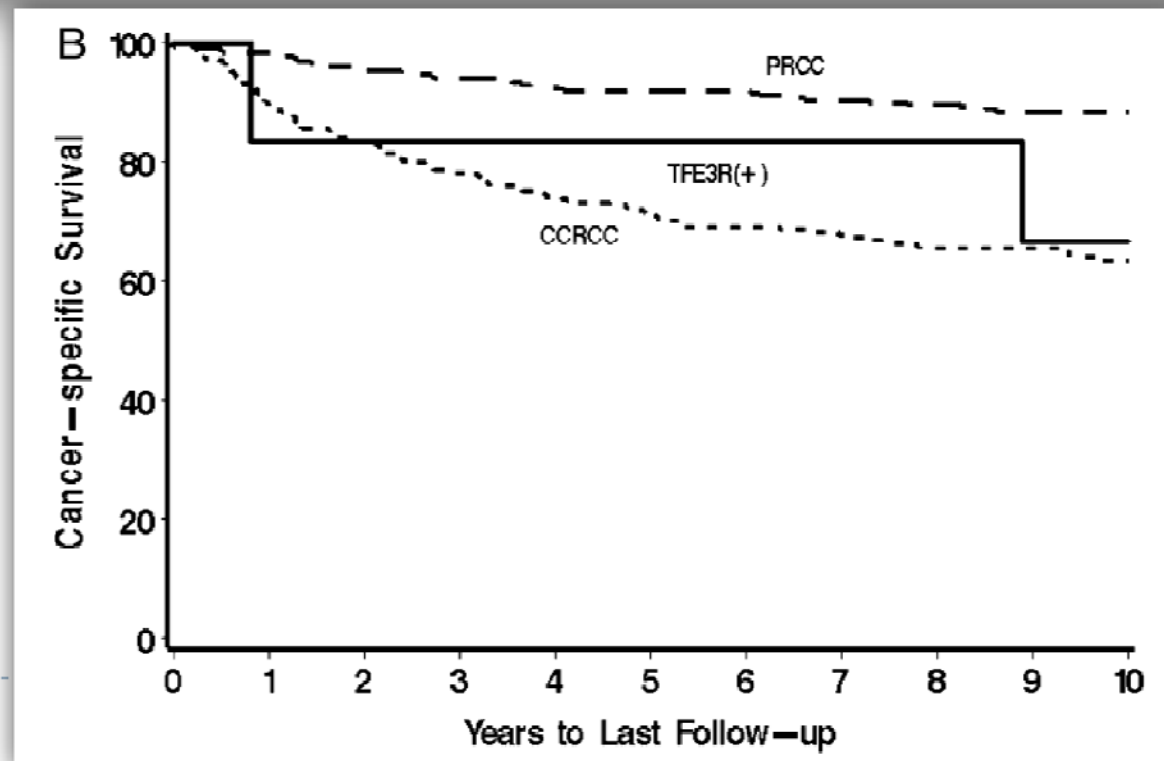
BJU Int. 2011 Jul;108 (2 Pt 2):E71-6.



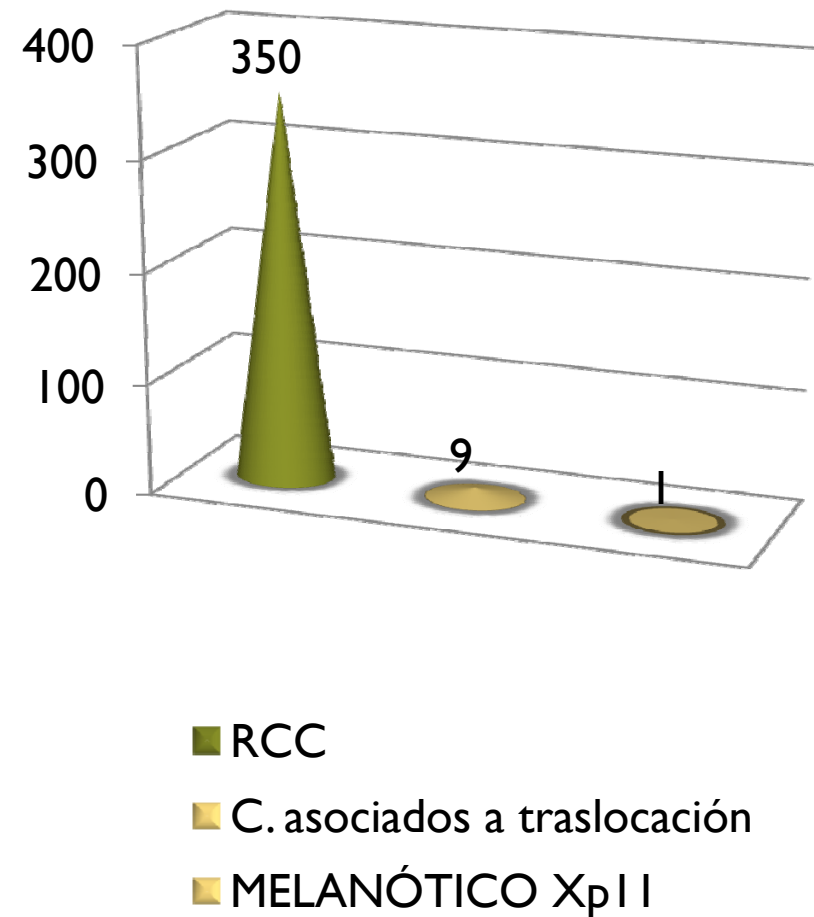
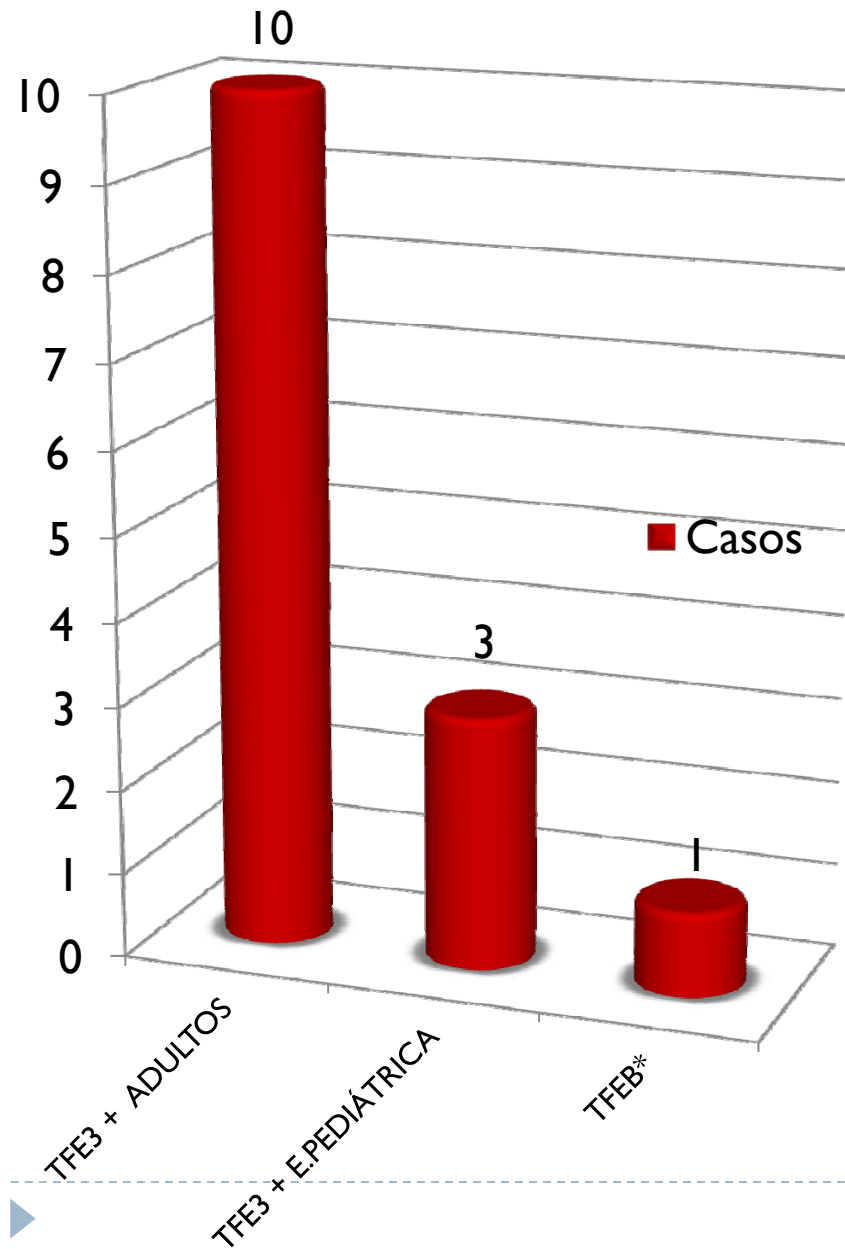
TFE3 Rearrangements in Adult Renal Cell Carcinoma: Clinical and Pathologic Features With Outcome in a Large Series of Consecutively Treated Patients

William R. Sukov, MD, Jennelle C. Hodge, PhD,* Christine M. Lohse, MS,†
Bradley C. Leibovich, MD,‡ R. Houston Thompson, MD,‡ Kathryn E. Pearce, BS,*
Anne E. Wiktor, BS,* and John C. Cheville, MD**

***Am J Surg Pathol* 2012 (36) 5: 663-670**



CASUÍSTICA HOSPITAL VALL D'HEBRON



Carcinoma Renal Xp.11 Melanótico

Nueva variante de Carcinoma
Renal con Traslocación TFE3 ,
(fusión PSF-TFE3) y
diferenciación melanocítica.



