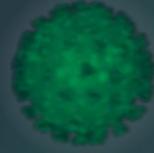




LIV Reunión Territorial de la Región de Murcia.

Sociedad Española de Anatomía Patológica

Oviedo Ramírez MI, Salazar Nicolás A, Ruiz García G, Segado Martínez M, Torroba Carón A, Ferri Ñíguez B.

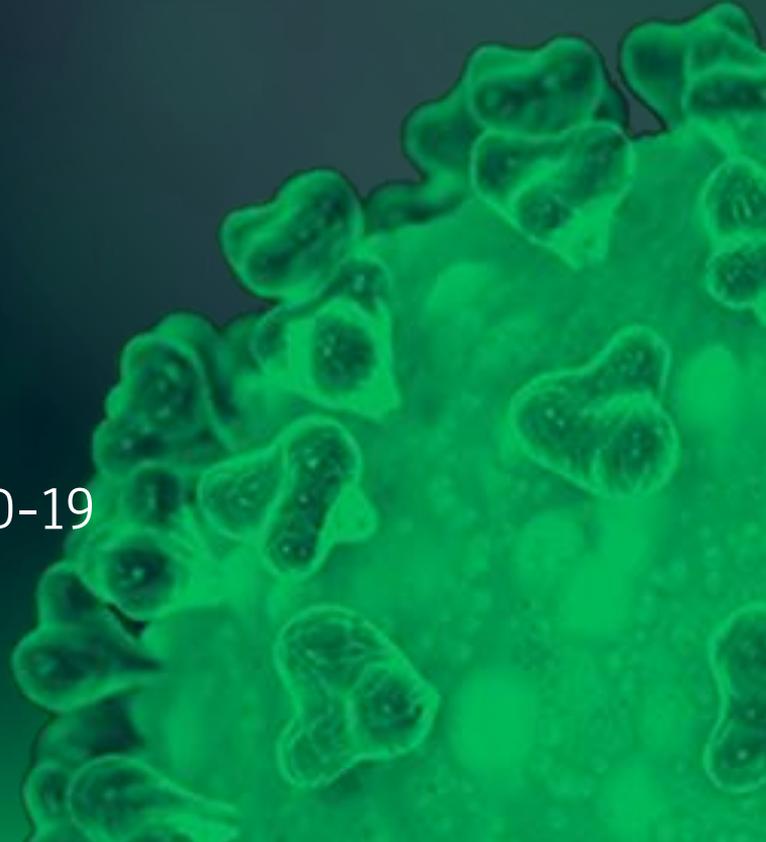


┌ Primera reunión Online
territorial Anatomía Patológica

Nuevo tipo de coronavirus:

SARS-CoV-2

La OMS designó la enfermedad COVID-19
(enfermedad por coronavirus 2019).



C A S O



Mujer de 19 años

Primigesta



Presenta sintomatología respiratoria inespecífica de una semana de evolución.



Embarazo de 33 SDG

Normoevolutivo



Acude por notar disminución de movimientos fetales.

C A S O



Ingresa para estudio en
Obstetricia

Positiva para Sars-Cov 2



Recién nacido con Apgar
4-5.

Intensa dificultad
respiratoria



Disminución de
movimientos fetales

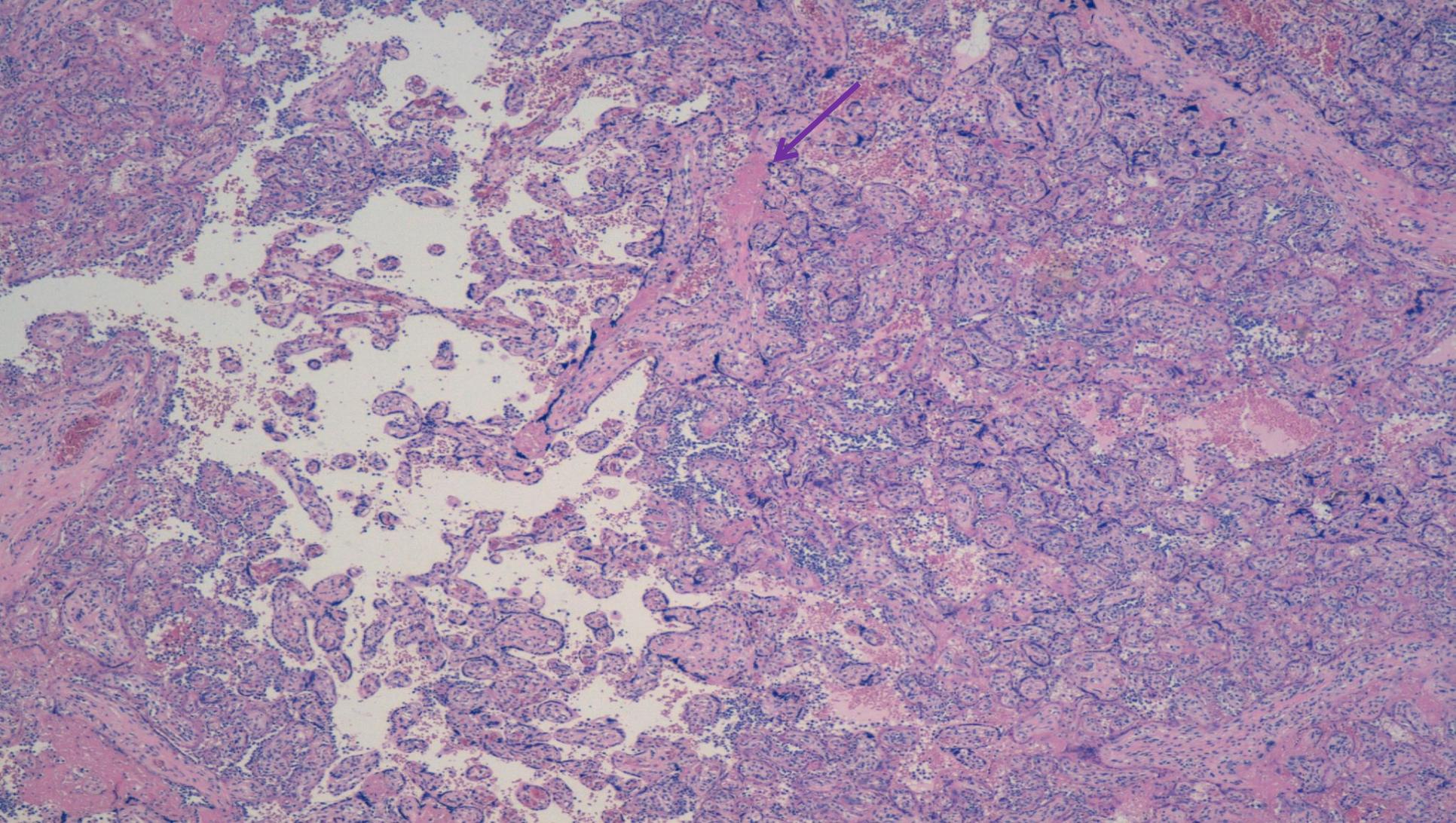
Inducción de parto

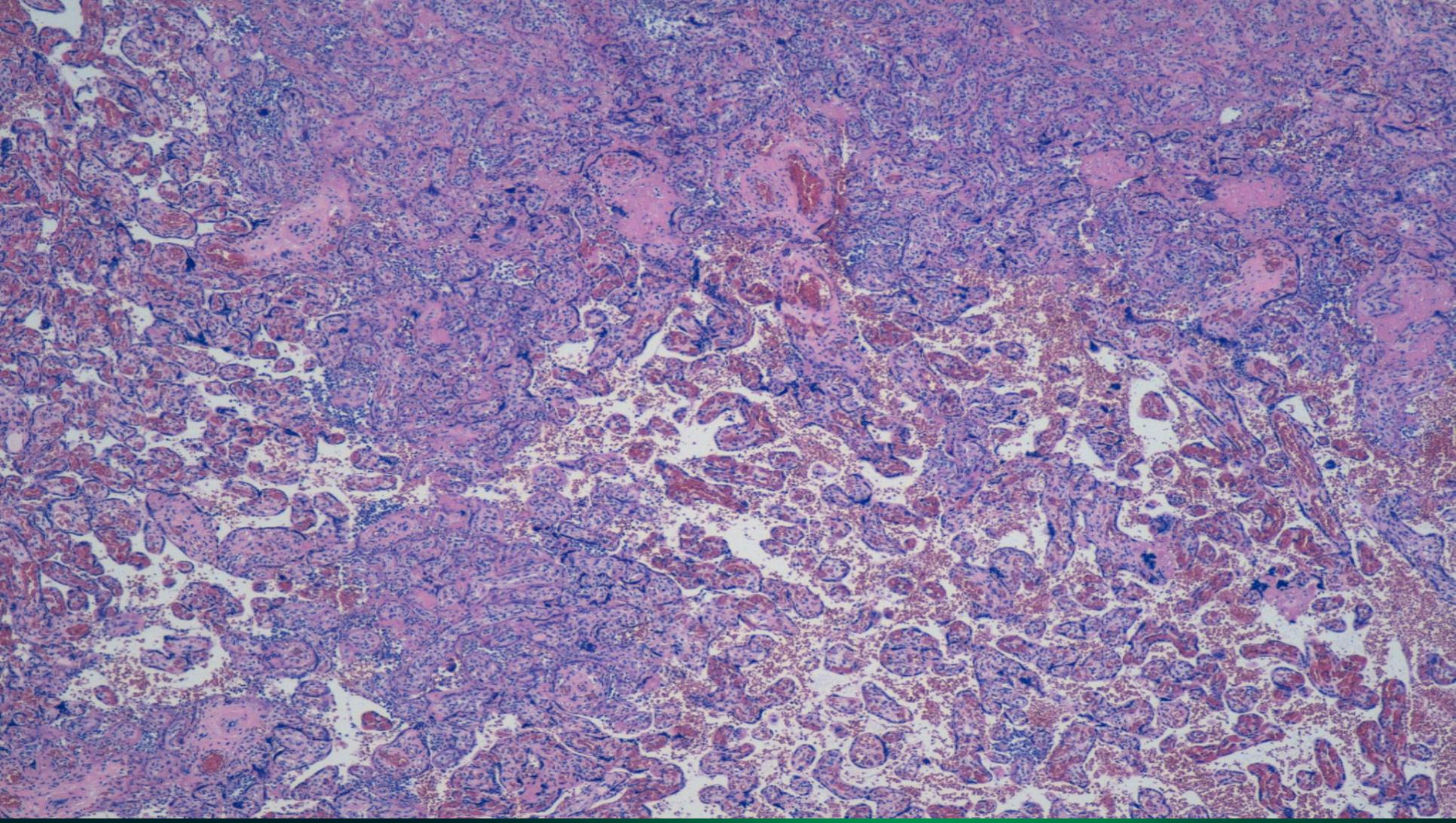


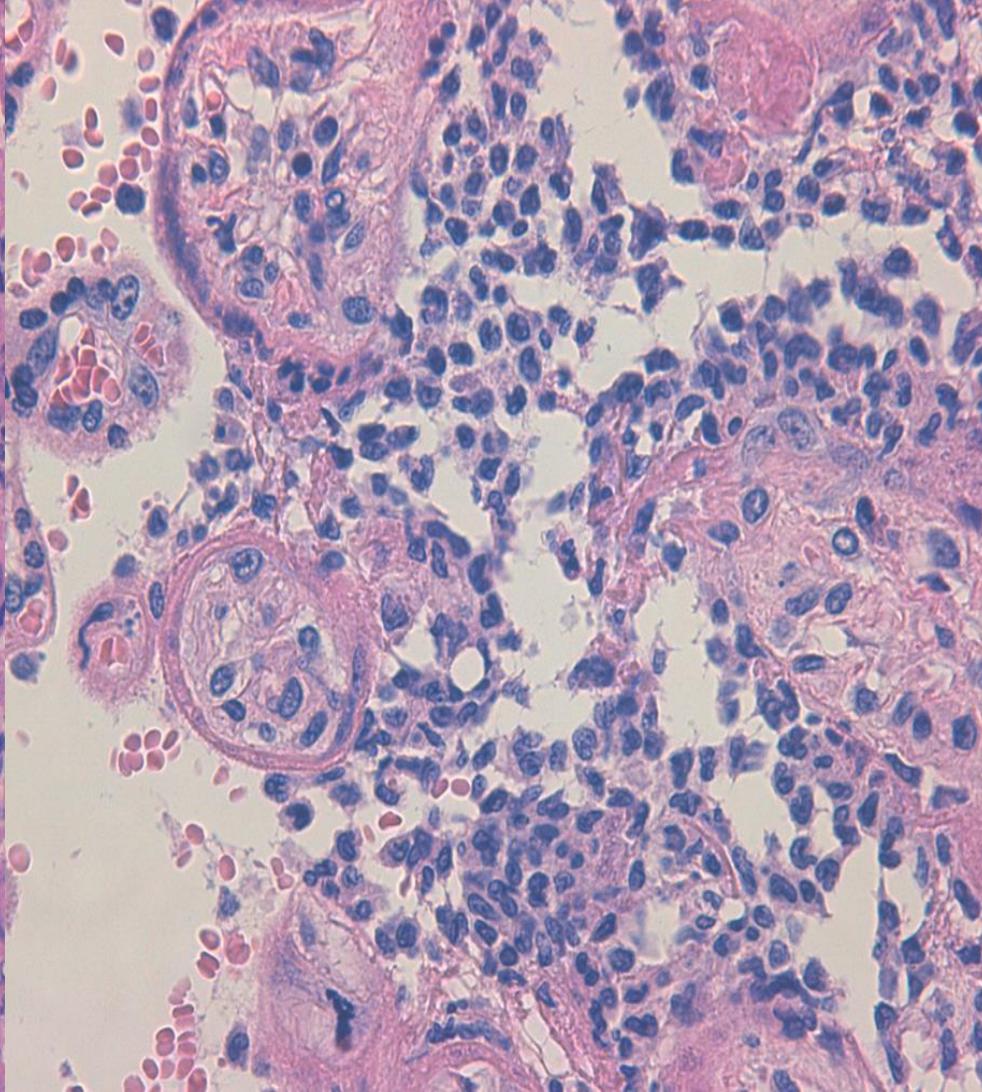
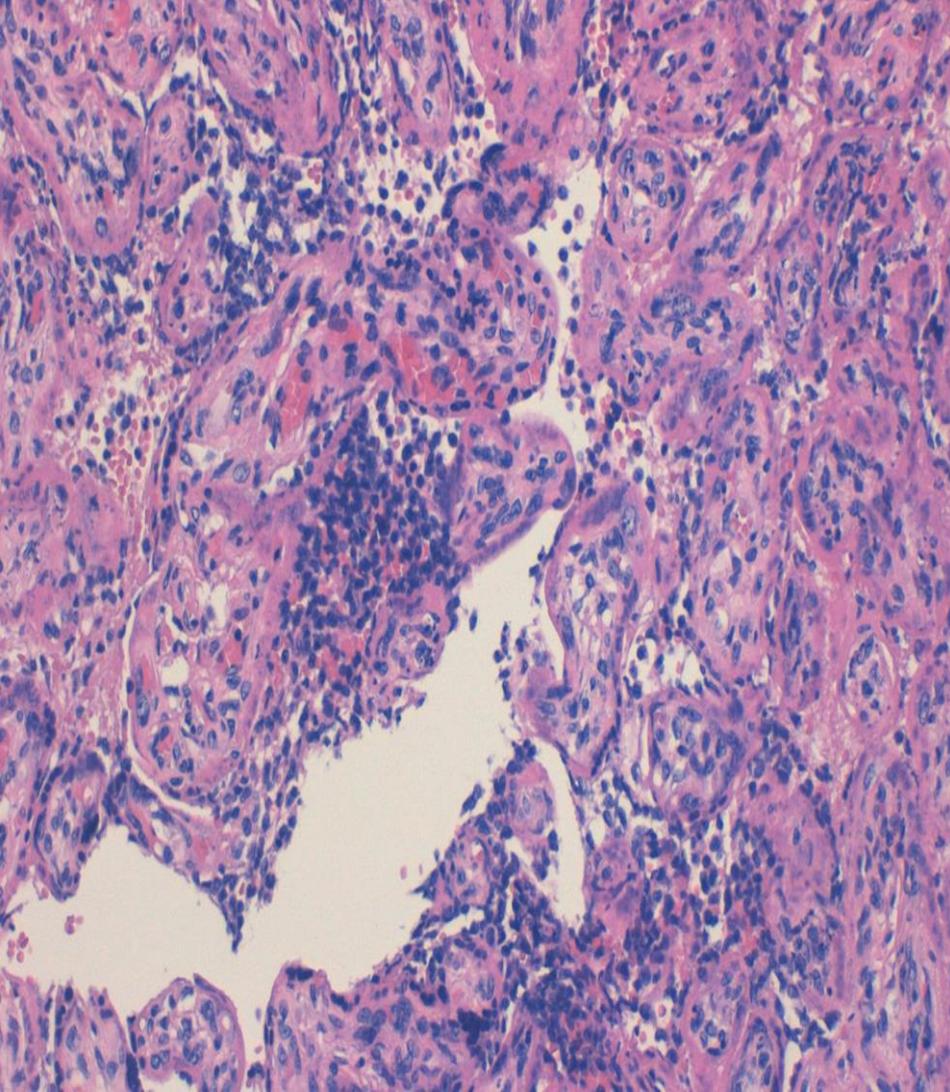
Recién nacido ingresa
a UCI NEONATAL

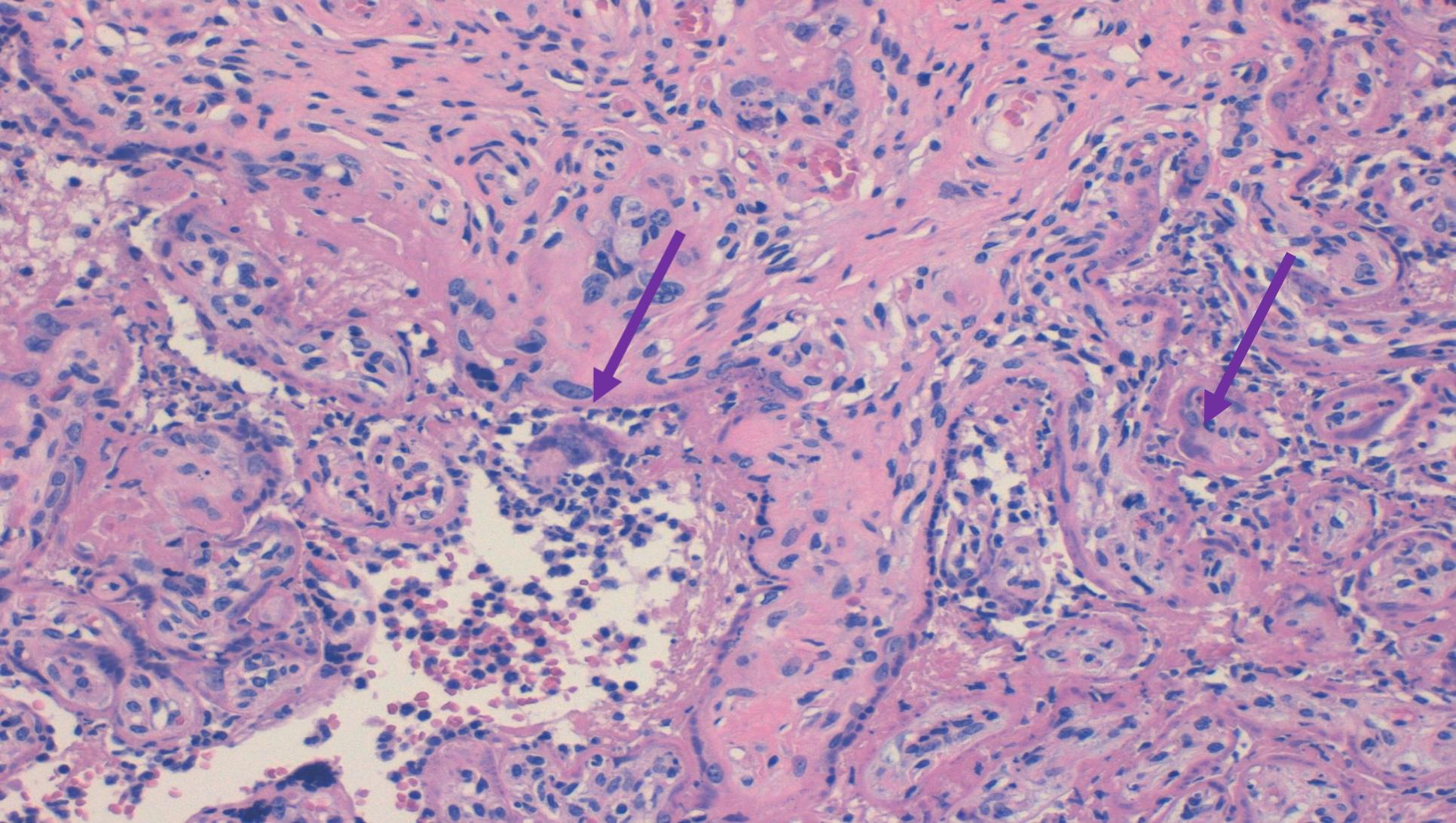
Positivo a Sars-Cov2

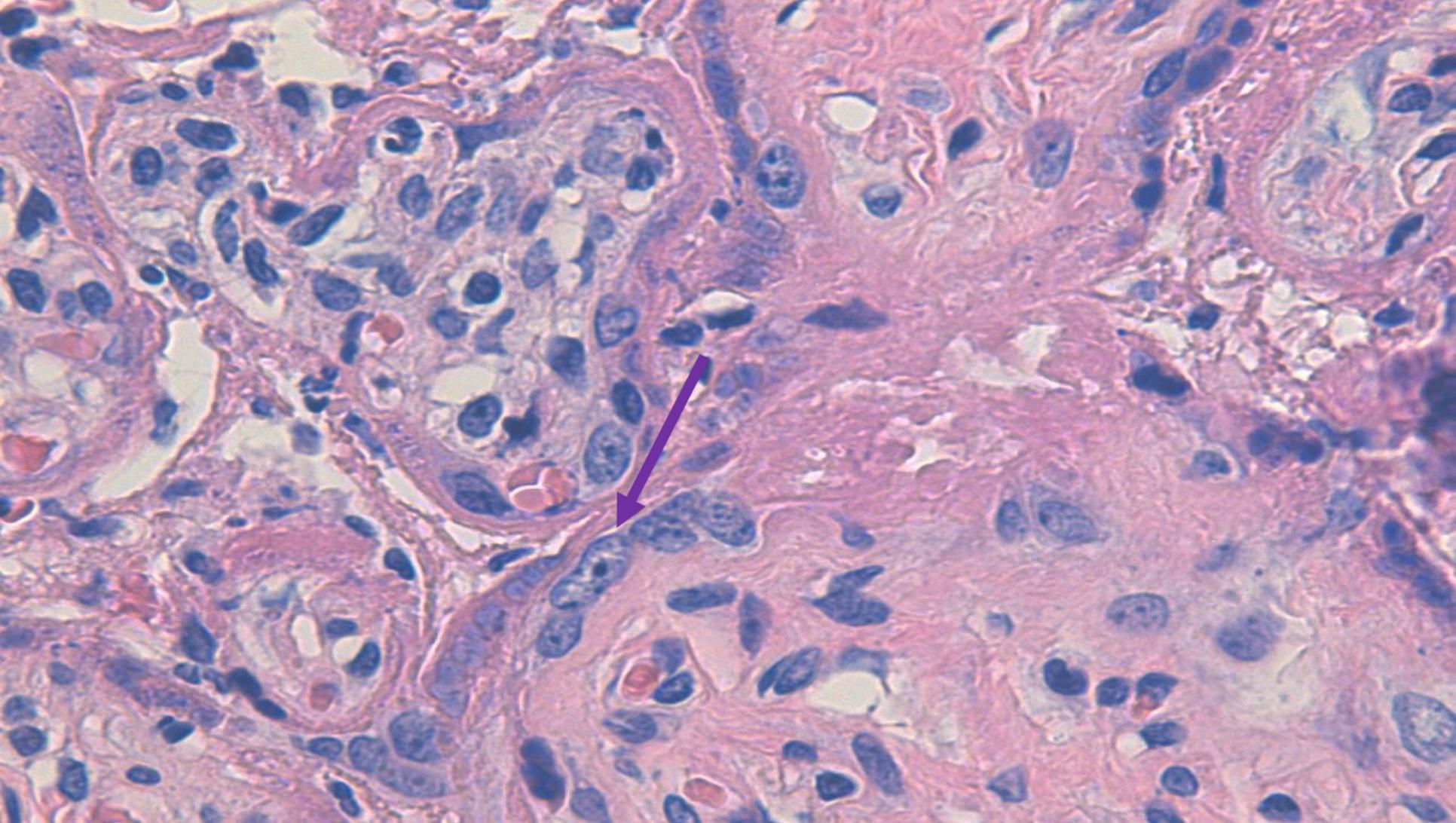


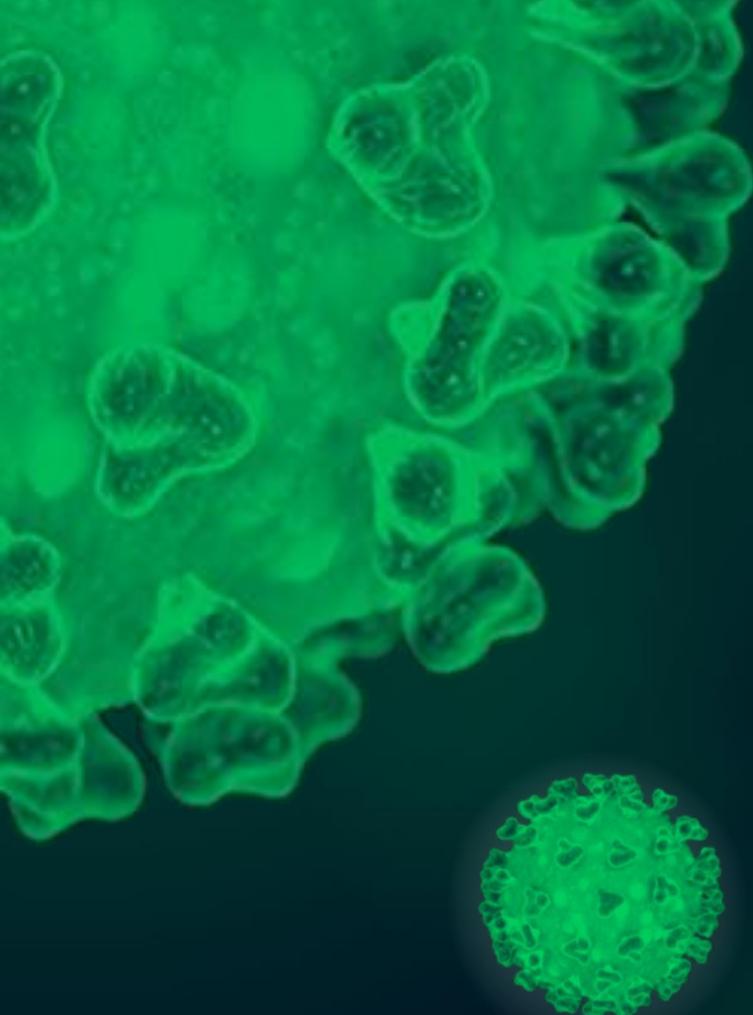






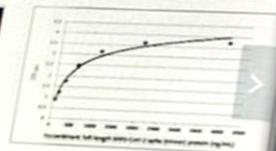
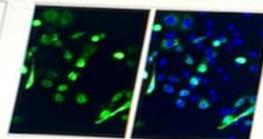
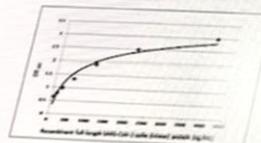






SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [1A9]

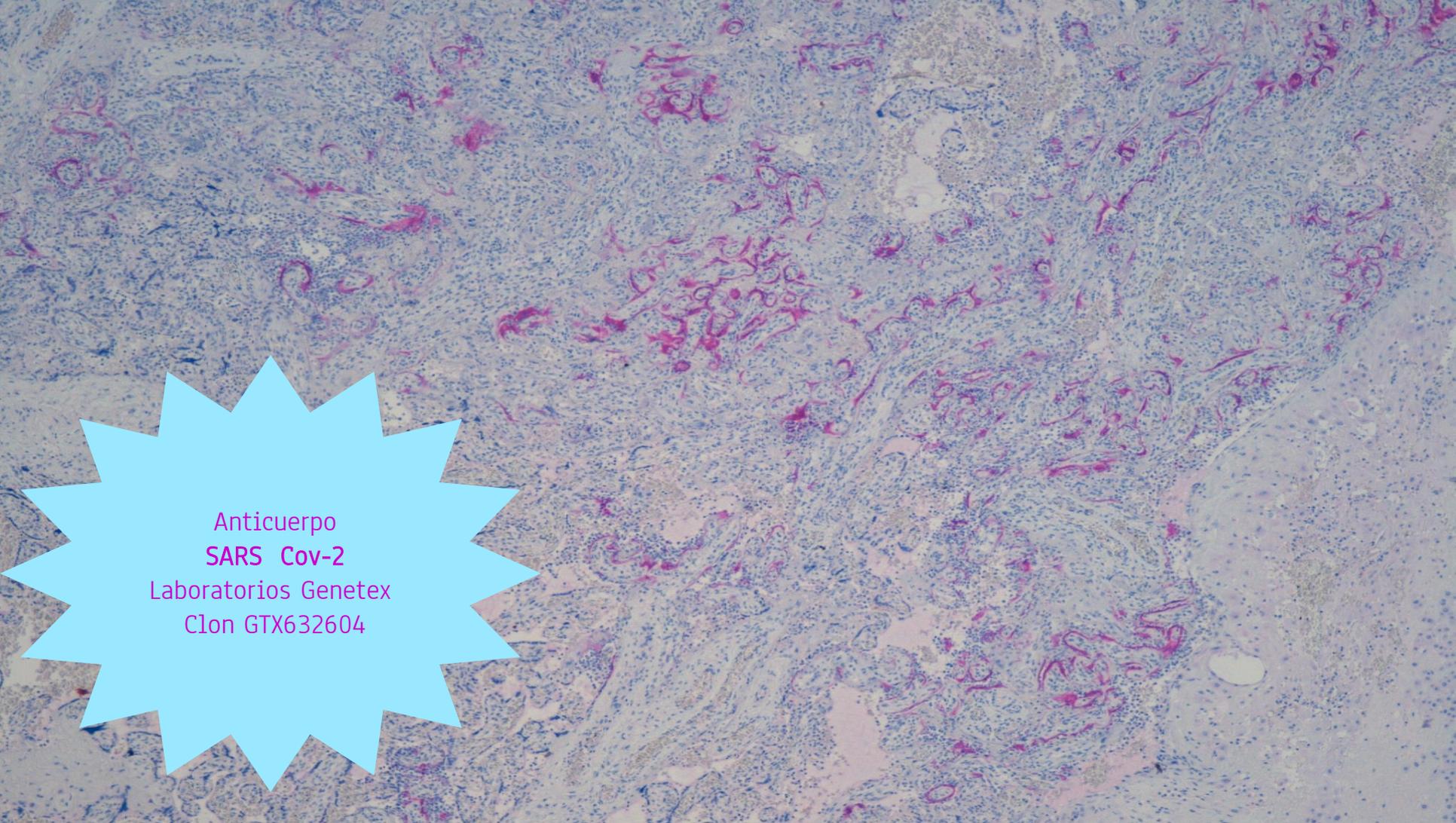
Protein Overexpression



Cat No. GTX632604

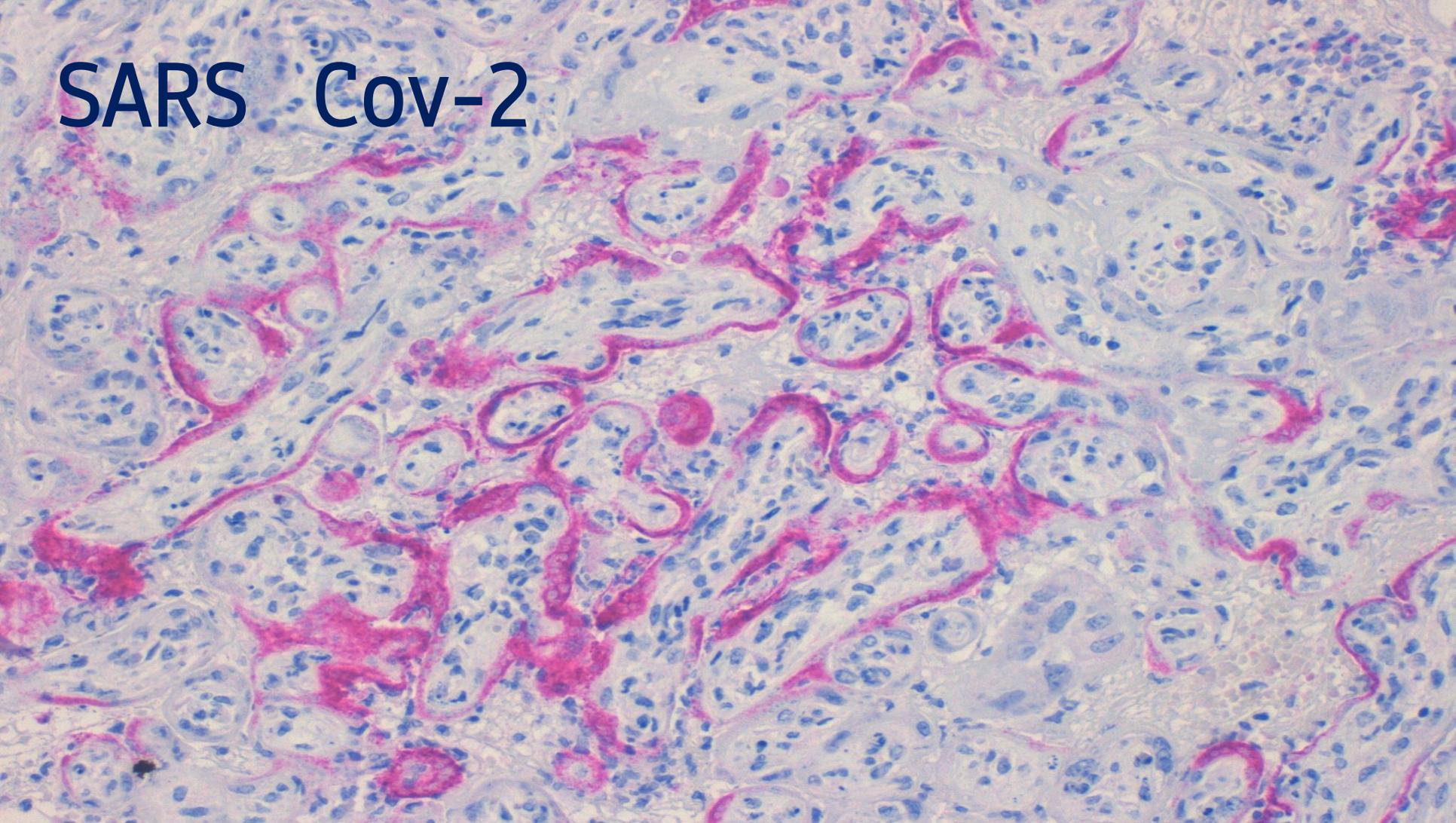
Reference (32) ★★★★★ (9)

Host	Mouse
Clonality	Monoclonal
Clone Name	1A9
Isotype	IgG1
Application	WB, ICC/IF, IHC-P, FACS, IP, ELISA, Sandwich ELISA, IHC-P (cell pellet)
Reactivity	SARS Coronavirus, SARS Coronavirus 2

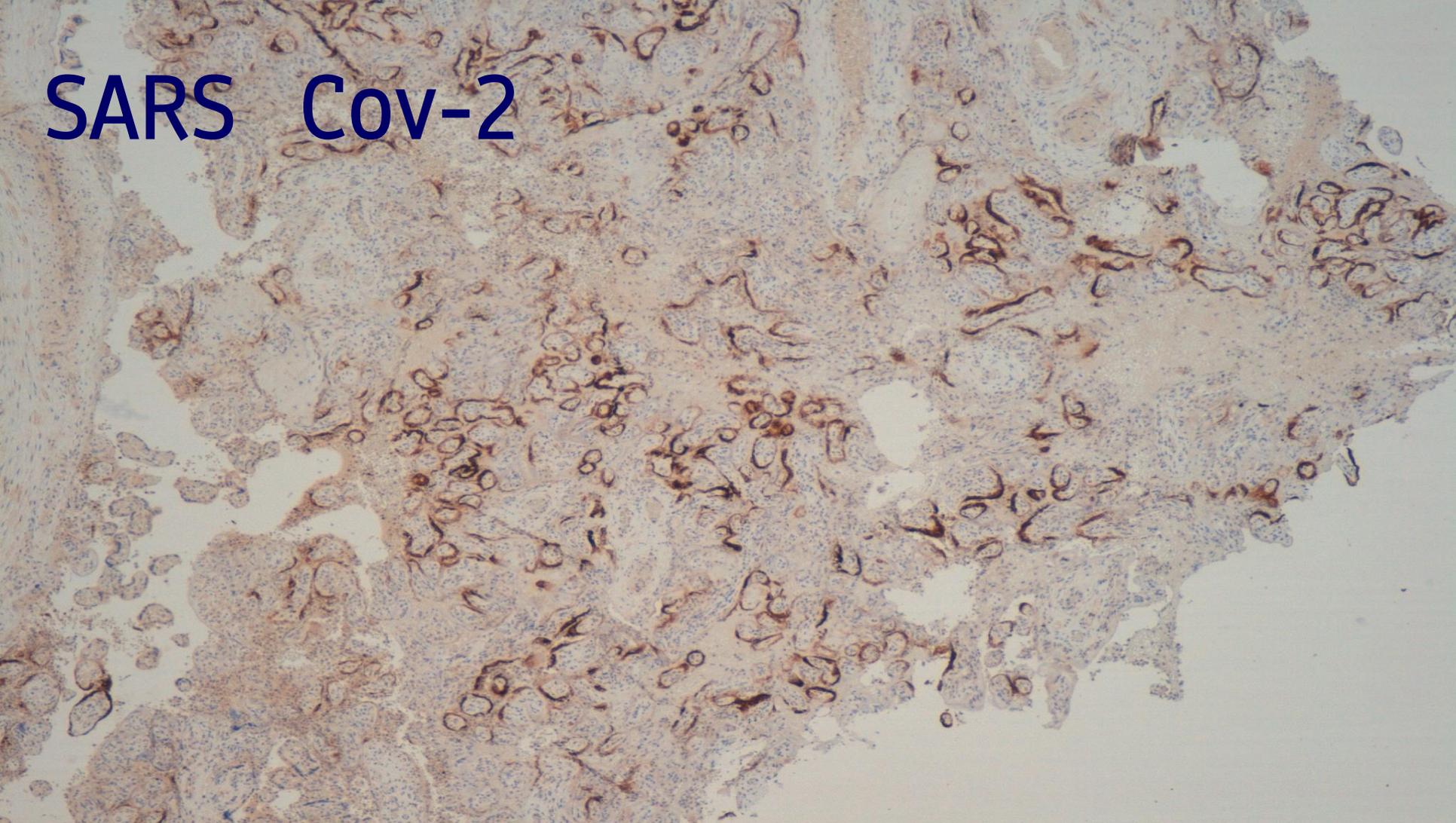
A histological slide showing tissue with red staining and a cyan starburst overlay. The tissue appears to be stained with hematoxylin and eosin (H&E), with blue nuclei and pink cytoplasm/extracellular matrix. The red staining highlights specific structures, possibly viral inclusions or cellular debris. The cyan starburst is a graphic element used for text overlay.

Anticuerpo
SARS Cov-2
Laboratorios Genetex
Clon GTX632604

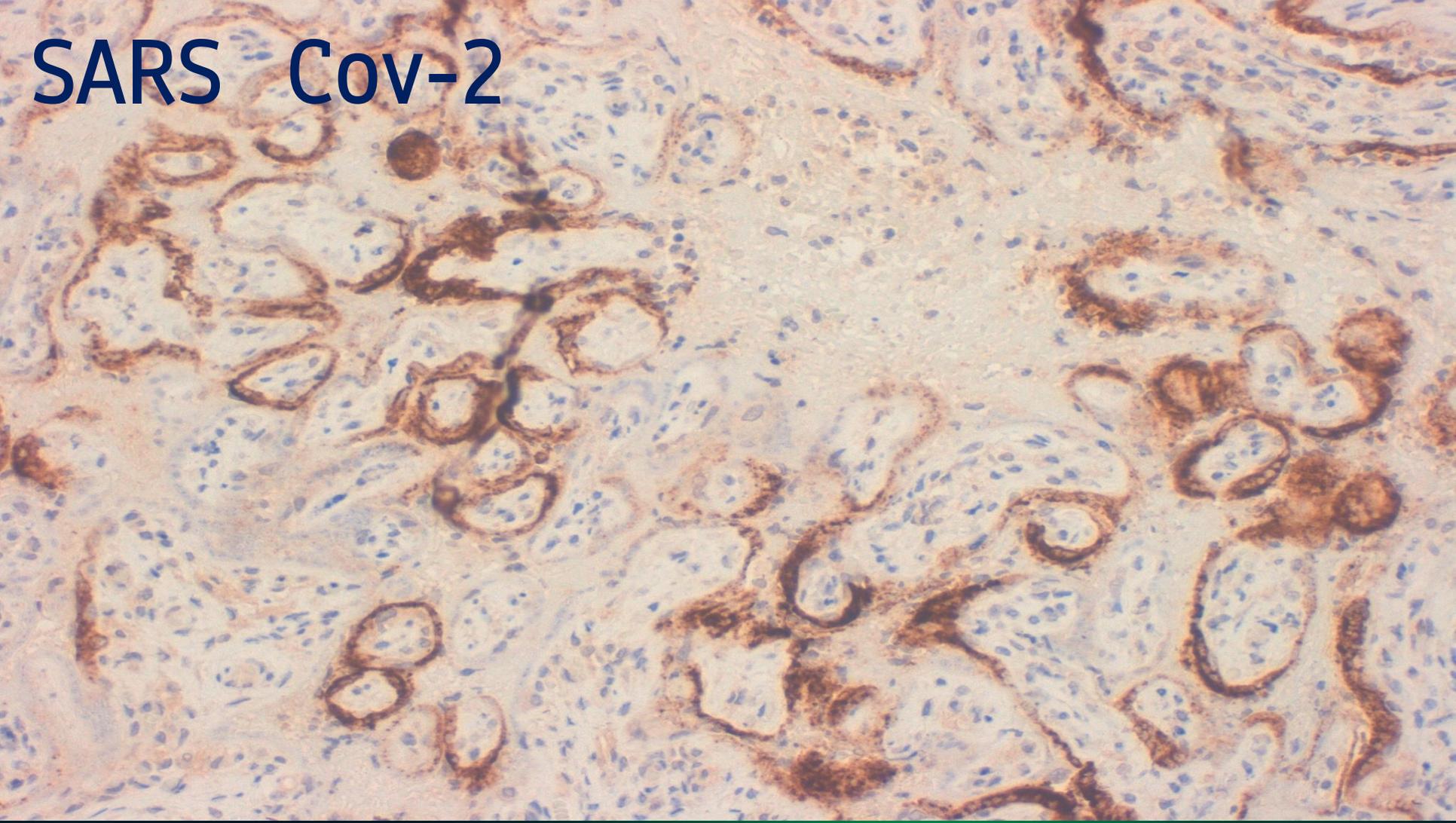
SARS Cov-2



SARS Cov-2



SARS Cov-2



Infeción placentaria por SARS Cov-2

CARACTERÍSTICAS

- Inicialmente se dudaba de la transmisión vertical.
- Las placentas de mujeres con SARS-Cov-2 no suelen mostrar cambios histopatológicos.
- Pocos casos descritos (¿ 4?). Revisión más importante Sharp Nov 2020.
 - Smithgall et al 51 casos + (ningún neonato afecto) sin cambios HP
 - Shaens et al Julio 2020 .16 +. 3 con cambios HP . Neonatos negativos. No refirió IHQ ni otras pruebas.
 - Vivanti Julio 2020. 1 caso de transmisión vertical (neonato+, placenta+)
 - Fenzia Octubre 2020. 31 mujeres +. 3 casos con cambio HP y virus
(neonato+ y placentas +)



Infección placentaria por SARS Cov-2

CARACTERÍSTICAS

- La barrera placentaria impide la transmisión vertical **en la mayor parte** de gestantes con SARS-Cov-2.
- Escasos casos descritos de transmisión vertical. Predominantemente en partos pretérmino.

↑ riesgo

Transplacental transmission of SARS-CoV-2 infection

Alexandre J Vivanti¹, Christelle Vauloup-Fellous², Sophie Prevot³, Veronique Zupan⁴, Cecile Suffee⁵, Jeremy Do Cao⁶, Alexandra Benachi¹, Daniele De Luca^{7, 8}

Affiliations [+ expand](#)

PMID: 32665677 PMCID: PMC7360599 DOI: 10.1038/s41467-020-17436-6

[Free PMC article](#)

Abstract

SARS-CoV-2 outbreak is the first pandemic of the century. SARS-CoV-2 infection is transmitted through droplets; other transmission routes are hypothesized but not confirmed. So far, it is unclear whether and how SARS-CoV-2 can be transmitted from the mother to the fetus. We demonstrate the transplacental transmission of SARS-CoV-2 in a neonate born to a mother infected in the last trimester and presenting with neurological compromise. The transmission is confirmed by comprehensive virological and pathological investigations. In detail, SARS-CoV-2 causes: (1) maternal viremia, (2) placental infection demonstrated by immunohistochemistry and very high viral load; placental inflammation, as shown by histological examination and immunohistochemistry, and (3) neonatal viremia following placental infection. The neonate is studied clinically, through imaging, and followed up. The neonate presented with neurological manifestations, similar to those described in

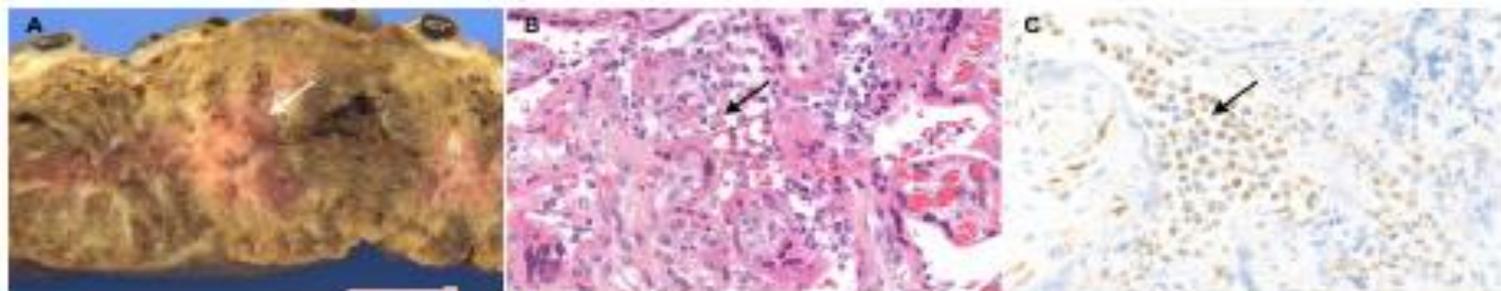


Fig. 4 Gross and microscopic examination of the placenta. **a** The macroscopic lesions of perivillous fibrin deposition with infarction, as irregular strands of pale yellow-white induration (arrow). **b** Microscopic lesions of intervillitis characterized by an infiltrate of the intervillous spaces made of neutrophils and histiocytes (arrow) (HES stain, original magnification $\times 400$). **c** The intervillitis with several CD68-positive histiocytes (arrow); neutrophils are negative with this anti-macrophage antibody (anti-CD68 immunohistochemistry, original magnification $\times 400$).

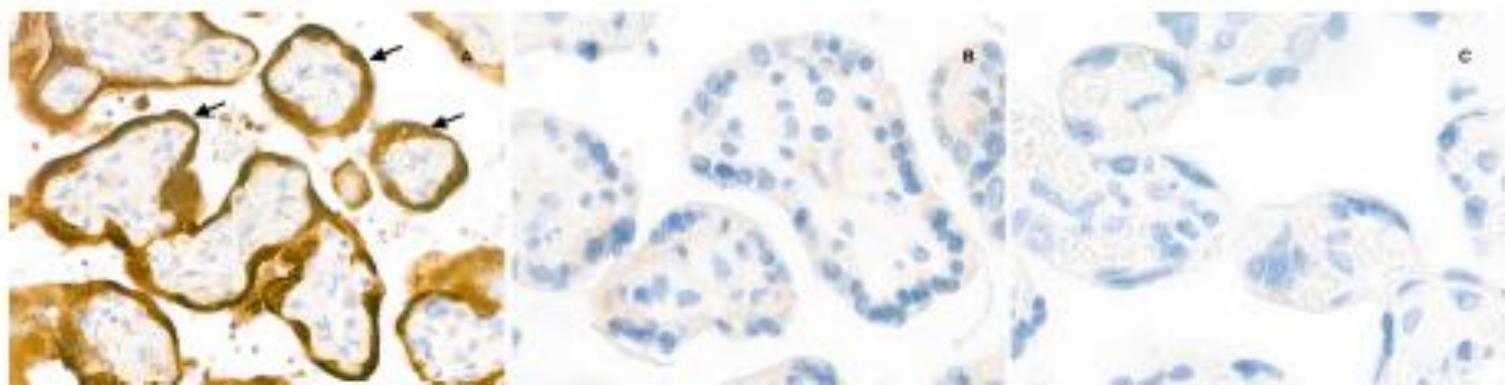


Fig. 5 Placental immunostaining for SARS-CoV-2 N-protein (anti-N immunohistochemistry, original magnification $\times 800$). **a** The intense brown cytoplasmic positivity of peri-villous trophoblastic cells in the placenta of our case (arrows). **b, c** Two negative controls (primary antibody, two SARS-CoV-2 negative placentas).



Placenta

2020, Pages 13-29



3.1.5. Evidence of SARS-CoV-2 infection in neonates/placentas

Four studies tested fetal tissues following terminations, miscarriages or stillbirths reported negative PCR results for SARS-CoV-2 [18,22,28,36]. Baud et al. tested the placental cotyledon and placenta “sub-membrane”, both of which were positive for SARS-CoV-2 RNA, but the amniotic fluid was negative [36]. Hosier et al. reported a positive result for SARS-CoV-2 RNA in the umbilical cord and the placental samples [18]. These authors also reported positive identification of the virus in the syncytiotrophoblast via *in situ* hybridisation. Lokken et al. reported negative PCR results in the placenta following stillbirth, although the time interval between fetal demise and sampling may have adversely affected sample quality [22]. The placentas of four stillborn infants, including a set of DCDA twins, tested positive for SARS-CoV-2 [30,34], whilst one placenta tested negative [30]. The amniotic fluid of the twin pregnancy tested positive, whilst the amniotic sacs tested negative [34].

Of the studies reporting live births, 34 tested some or all the neonates for SARS-CoV-2. Out of 307 neonates tested, 7 (2%) were positive: three within 24 h of birth [23,55,57], two within 36 h of birth [37,41] (although these studies may report the same infant), one 7 days after delivery [23] and for one infant it was unclear when testing for SARS-CoV-2 was carried out [19].

Across all studies, the following samples were tested for the presence of SARS-CoV-2 RNA: placenta (19 studies), placental membranes (2 studies), amniotic fluid (10 studies), umbilical cord (3 studies), and umbilical cord blood (11 studies). Of the 19 studies that tested for SARS-CoV-2 RNA in the placenta [16,17,19–21,24,26,37,38,41,42,44,46–49,52,53,55], 14 reported negative results (three neonates tested positive [19,26,41]), 4 studies reported positive results [26,42,44,55] and one

Placental morphology and
associated with

Yong Zou^a, Chloe A. Brady^a, Yousef Almoghrabi^a,

Alan Kerby^a, Kajal K. Tamber^a, Carolyn J. Jones^a, Kristina M. Adams Waldorf^c, Alexander E.P. Heazell^{a, d}

Cambios histopatológicos descritos en placentas afectas por SARS-Cov 2:

Intervillositis

crónica

(Linfocitos e histiocitos)

Aumento de fibrina

en espacio intervelloso

¿Inclusiones?

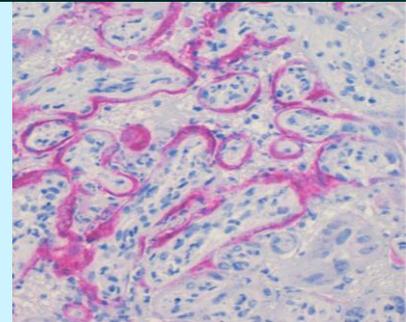
Alteración en la maduración

Arteriopatía decidual

Signos de mala perfusión
materna

Inmunohistoquímica:

El sincitiotrofoblasto y decidua poseen receptores para la ECA a la que se une el virus.





Gracias por su atención