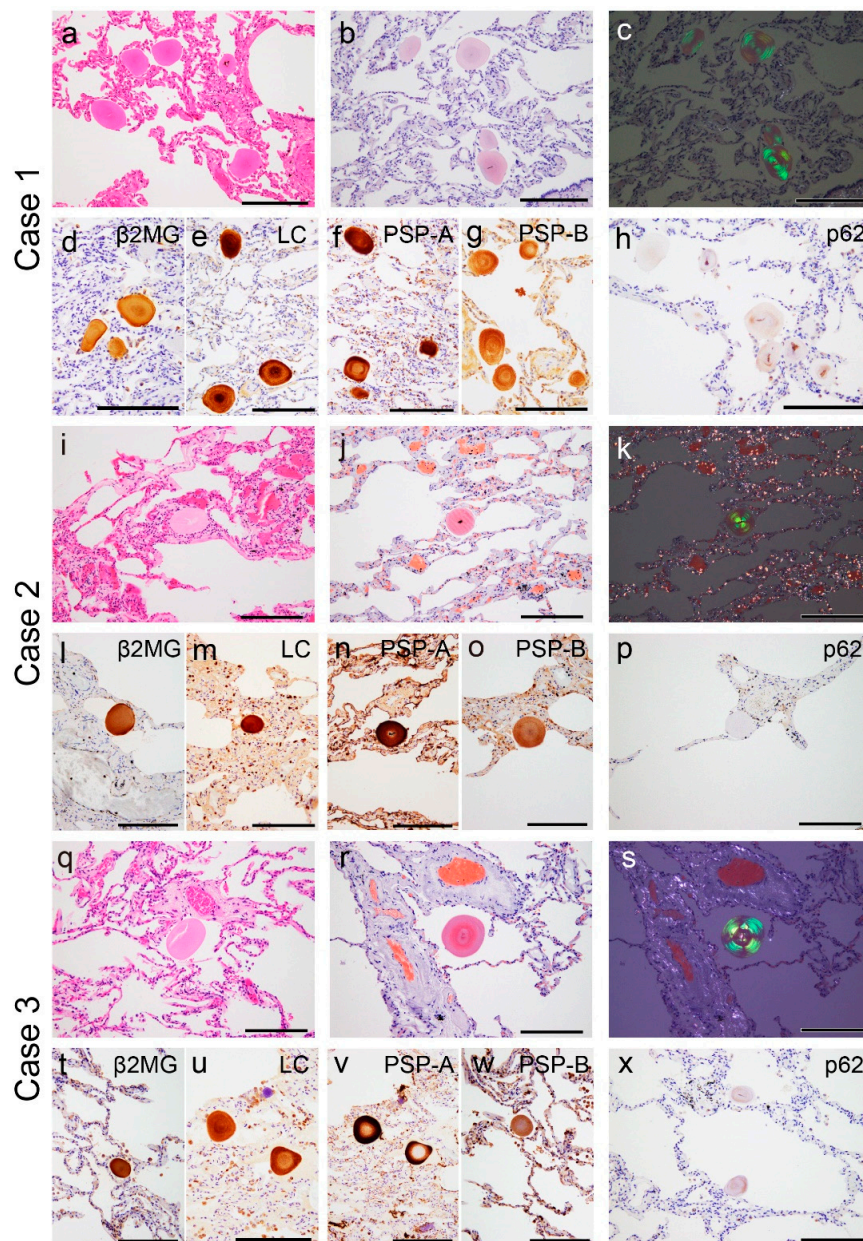


Online Supplemental Material

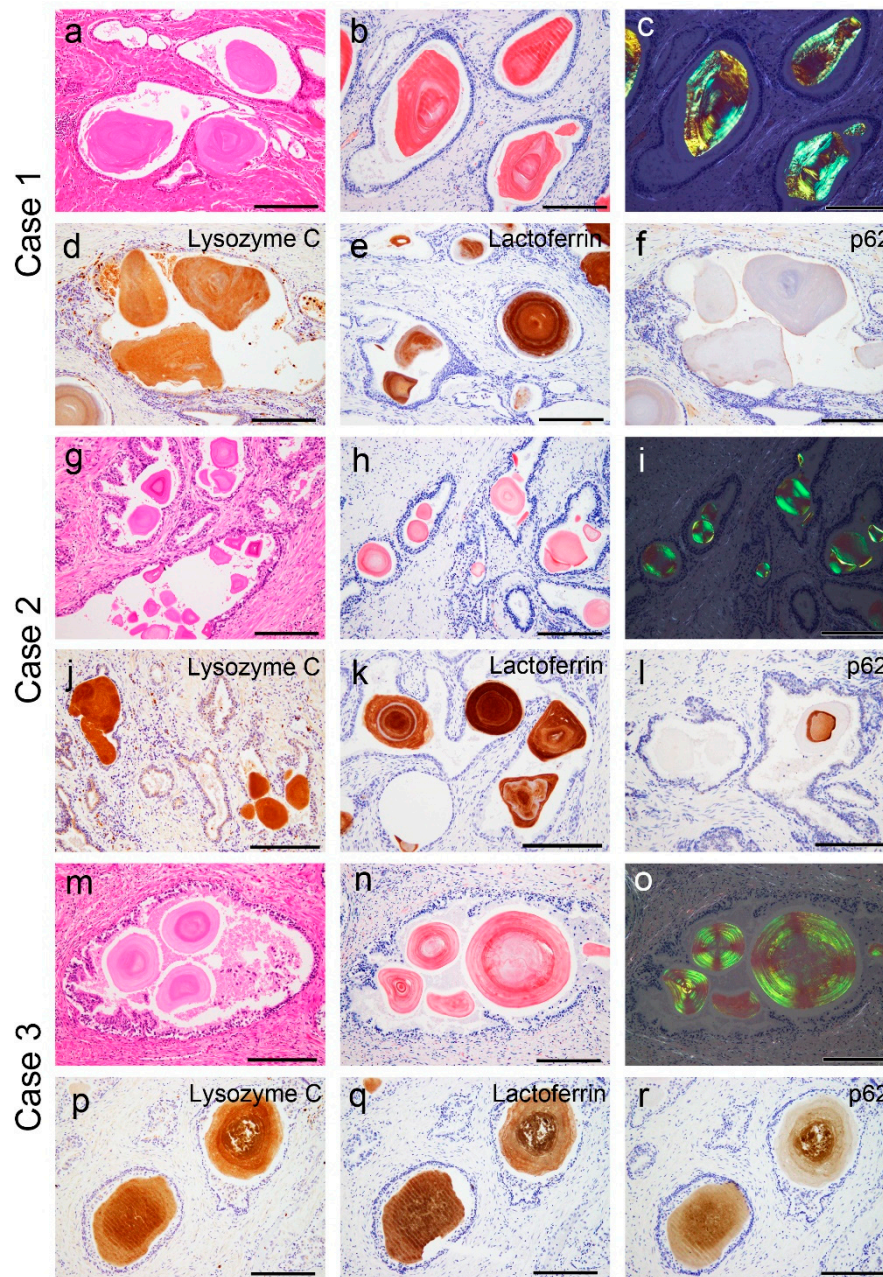
Supplementary Table S1. Details of the antibodies used in this study.

| Antibody | Source | Clone | Dilution | Antigen retrieval |
|------------------|-----------------------------|------------|----------|--------------------|
| Igλ | Abcam | polyclonal | 1:1600 | 98% FA (1 min) |
| β2-microglobulin | GeneTex | polyclonal | 1:3000 | 98% FA (1 min) |
| Lysozyme C | Santa Cruz Biotechnology | E-5 | 1:150 | 98% FA (1 min) |
| PSP-A | Abcam | 6F10 | 1:4000 | 98% FA (1 min) |
| PSP-B | Santa Cruz Biotechnology | F-2 | 1:4000 | 98% FA (1 min) |
| Lactoferrin | Santa Cruz Biotechnology | B97 | 1:150 | 98% FA (1 min) |
| Olfactomedin 4 | Abcam | polyclonal | 1:50 | Heat (20 min, pH6) |
| p62 | Biomol | polyclonal | 1:3000 | Heat (20 min, pH6) |

Abbreviations: FA, formic acid; PSP-A, pulmonary surfactant protein A; PSP-B, pulmonary surfactant protein B; Immunostaining was performed using the Leica Bond-IV automation and Leica Refine detection kits (Leica Biosystems, Bannockburn, IL, USA) according to the manufacturer's instructions. All sections were counterstained with hematoxylin.



Supplementary Figure S1. Representative microphotographs of the pulmonary corpora amylacea (CA) in all three cases. (a–h) Pulmonary CA Case 1; (i–p) Case 2; (q–x) Case 3. (a, i, q) Hematoxylin and eosin (H&E) staining; phenol Congo red (pCR) staining under bright field (b, j, r) and polarized light (c, k, s); Immunohistochemistry for β 2-microglobulin (β 2MG) (d, l, t); lysozyme C (LC) (e, m, u); pulmonary surfactant protein A (PSP-A) (f, n, v); PSP-B (g, o, w); and p62 (h, p, x). In all cases, CAs were round and eosinophilic deposits showed concentric laminations by H&E staining. In addition, all CAs exhibited congophilic and clear apple-green birefringence under polarized light. Furthermore, all CAs showed immunoreactivity for β 2MG, LC, PAP-A, and PSP-B. In contrast, immunoreactivity for p62 was weak and focal in Cases 1 and 3, whereas it was almost negative in Case 2. Scale bar = 200 μ m (a–x).



Supplementary Figure S2. Representative microphotographs of prostatic CA in all three patients. (a–f) Prostatic CA Case 1; (g–l) Case 2; and (m–r) Case 3. (a, g, m) H&E staining; pCR staining under bright field (b, h, n) and polarized light (c, i, o); Immunohistochemistry for lysozyme C (d, j, p); lactoferrin (e, k, q); and p62 (f, l, r). For all cases, the CAs were round and eosinophilic deposits showed concentric laminations by H&E staining. In addition, all CAs exhibited congophilic and clear apple-green birefringence under polarized light. Furthermore, all CAs showed immunoreactivity for lysozyme C and lactoferrin. Immunoreactivity for p62 was moderate in Case 3, but weak and focal in Cases 1 and 2. Scale bar = 200 μ m (a–r).

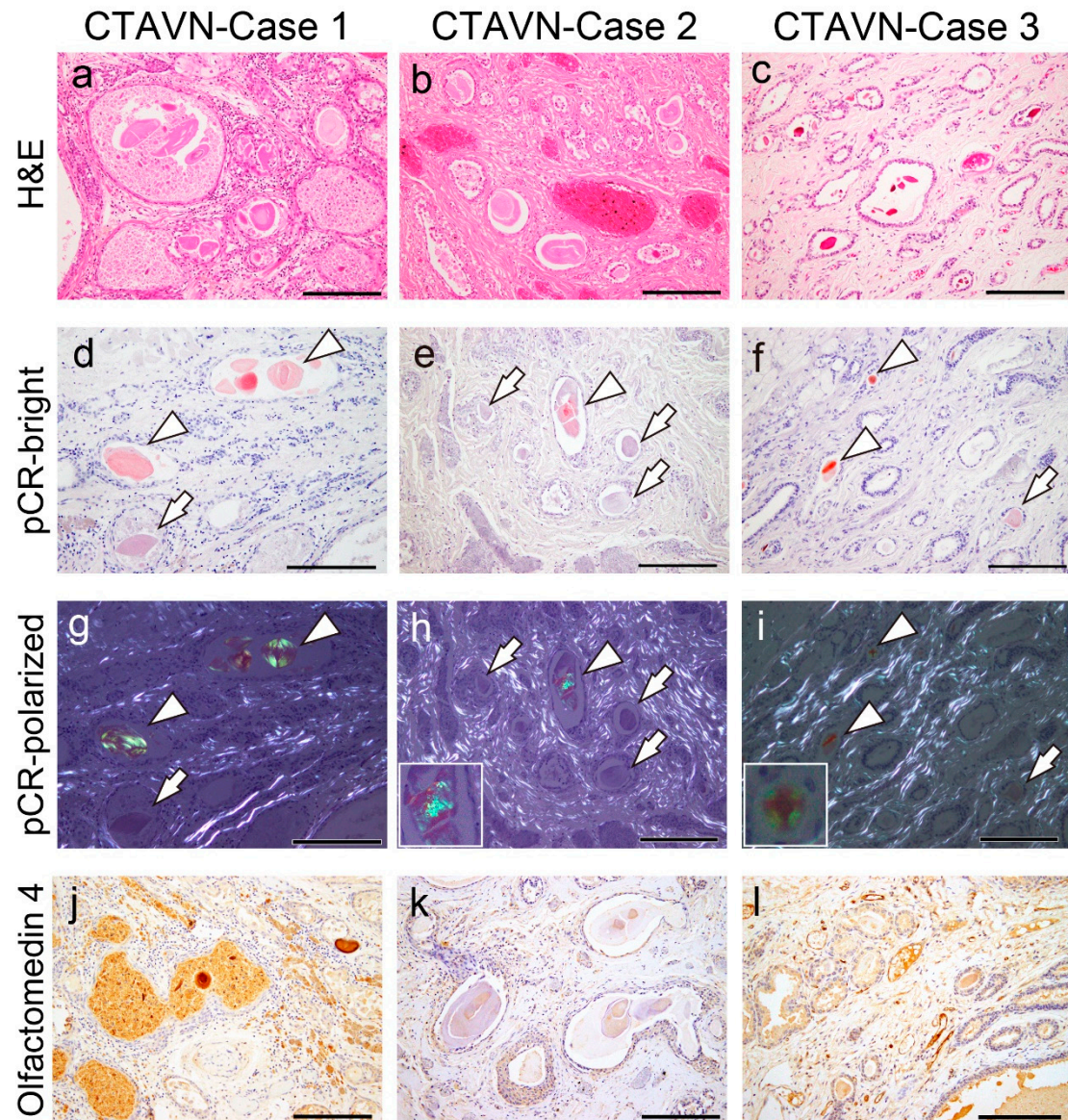
a PSP-A

1 MWLCPLALT ILMAASGAAC EVKDVCVGSP GIPGTPGSHG LPGRDGRDGV
51 KGDPGPPGPM GPPGETPCPP GNNGLPGAPG VPGERGEKGE AGERGPPGLP
101 AHLDEELQAT LHDFRHQILQ 123-137 138-157 TRGALSLQGS IMTVGEKVFS SNGQSITFDA
151 167-179 181-199 IQEACARAGG RIAVPRNPEE NEATASFVKK YNTYAYVGLT EGPSPGDFRY
201 SDGTPVNYTN WYRGEPAGRG KEQCVEMYTD GQWNRNCLY SRLTICEF

b PSP-B

1 MAESHLQWL LLLLPTLCGP GTAAWTSSL ACAQGPEFWC QSLEQALQCR
51 ALGHCLQEVW GHVGADDLCQ ECEDIVHILN KMAKEAIFQD 95-106 TMRKFLEQEC
101 201-212 NVLPLKLLMP QCNQVLDDYF PLVIDYFQNG TDSNGICMHL GLCKSRQPEP
151 EQEPGMSDPL PKPLRDPLPD PLLDKLVLPV LPGALQARPG PHTQDLSEQQ
201 218-224 225-252 FPIPLPYCWL CRALIKRIQA MIPKGALAVA VAQVCRVVPL VAGGICQCLA
251 253-264 265-272 287-295 ERYSVILLDT LLGRMLPQLV CRLVLRCSMD DSAGPRSPTG EWLPRDSECH
301 337-352 LCMSVTTQAG NSSEQAIPQA MLQACVGSWL DREKCKQFVE QHTPQLLTLV
351 PRGWAHTTC QALGVCGTMS SPLQCIHSPD L

Supplementary Figure S3. Proteomic analysis results for PSP-A and PSP-B in pulmonary CA lesions in Case 1. (a) PSP-A and (b) PSP-B. Detected peptides with peptide scores of 30 or higher in the MASCOT analysis are shown in red.



Supplementary Figure S4. Representative microphotographs of cystic tumors of the atrioventricular node (CTAVN)-associated CA in all three cases. (a, d, g, j) Prostatic CA Case 1; (b, e, h, k) Case 2; (c, f, i, l) Case 3. (a–c) H&E staining; pCR staining under bright field (d–f) and polarized light (g–i); (j–l) Immunohistochemistry for olfactomedin 4. For all cases, the CAs were round and eosinophilic deposits showed concentric laminations by H&E staining. For pCR staining, the CAs showed very weak (arrow) to moderate congophilia (arrowhead) (d–f), and those exhibiting moderate congophilia showed apple-green birefringence under polarized light (arrowhead) (g–i). Immunoreactivity of the CAs to olfactomedin 4 was strong in Case 1 (j), negative to weakly positive in Case 2 (k), and weakly positive in Case 3 (l). Scale bar = 200 μ m (c–e).