1. TriNationales GIST-Patienten-Forum ONLINE:
Seltene GIST-Subtypen verstehen (und behandeln...)

Florian Haller

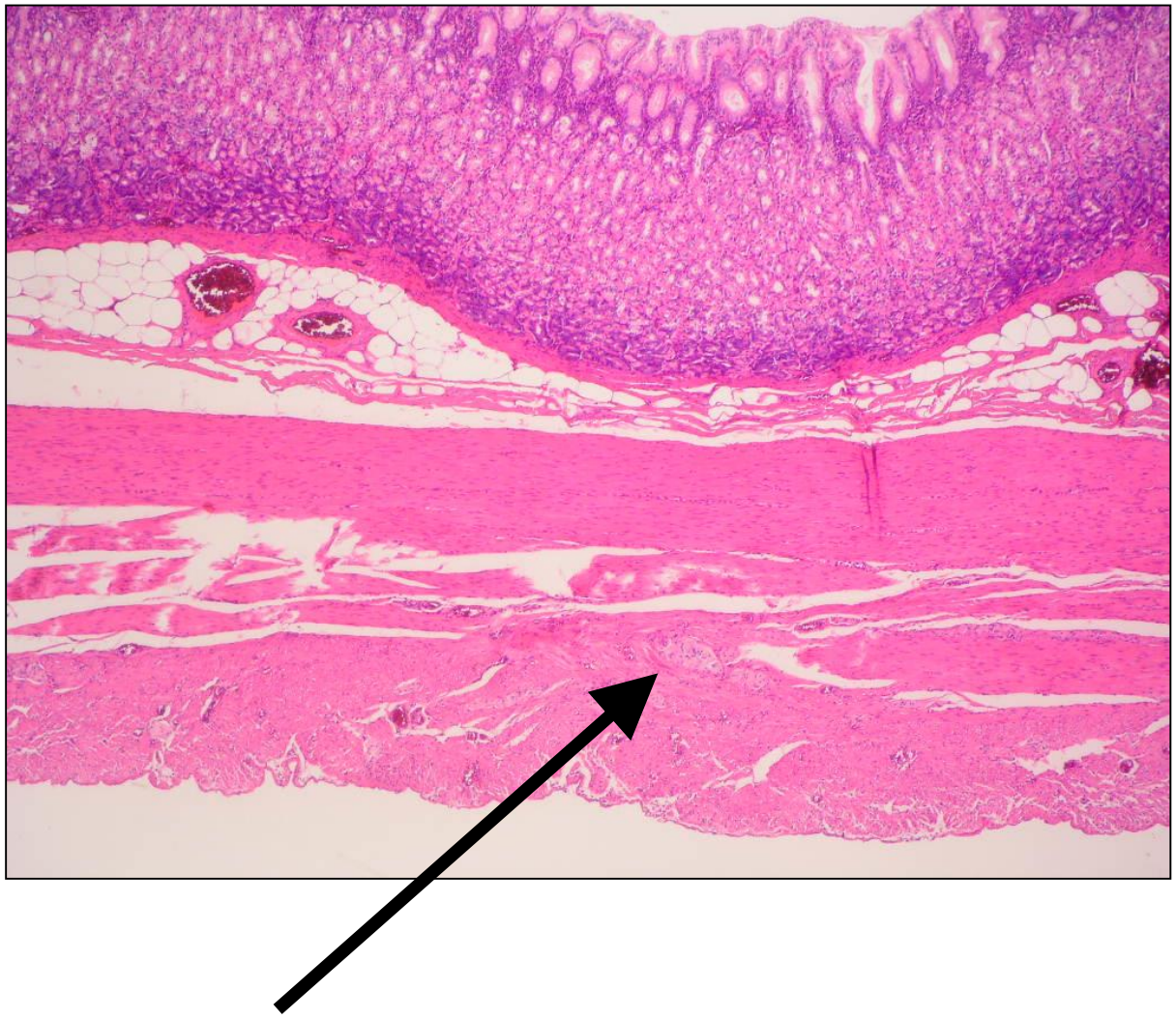
Diagnostische Molekularpathologie

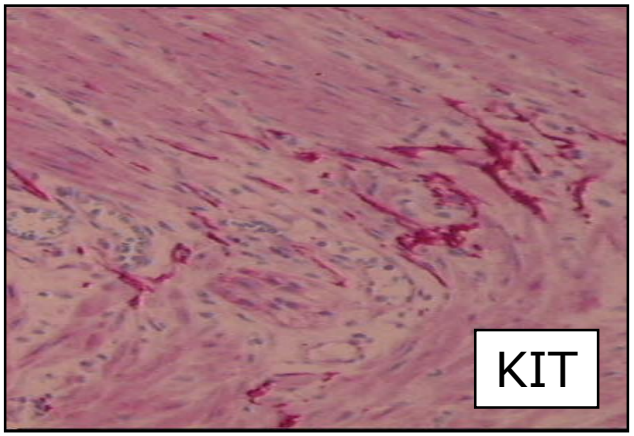
Institut für Pathologie Erlangen

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG
MEDIZINISCHE FAKULTÄT

Universitätsklinikum Erlangen

Interstitielle Zellen von Cajal (ICCs)





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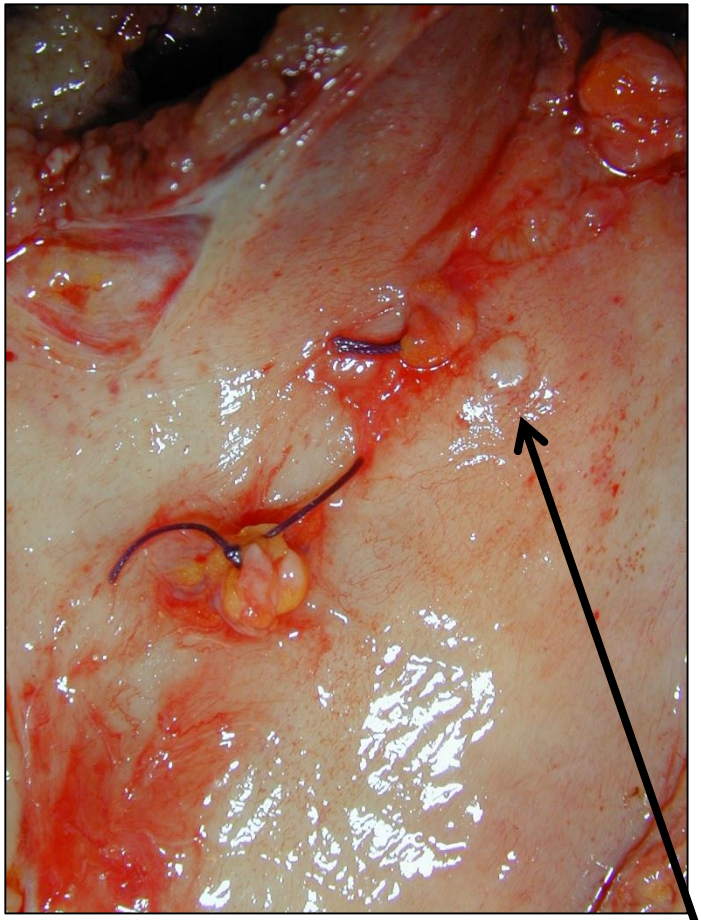
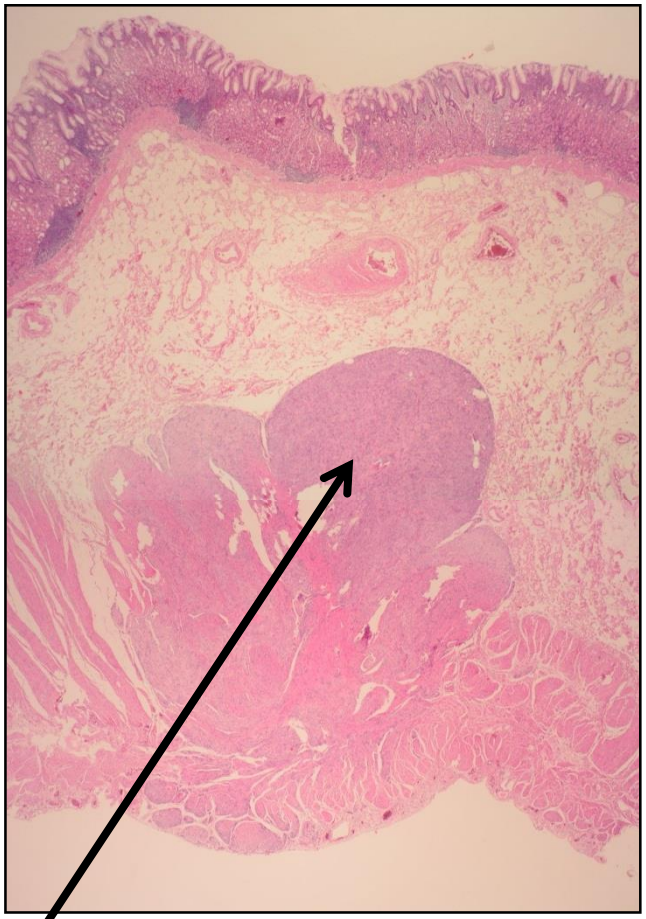
Klinisches Spektrum: Mini-GIST





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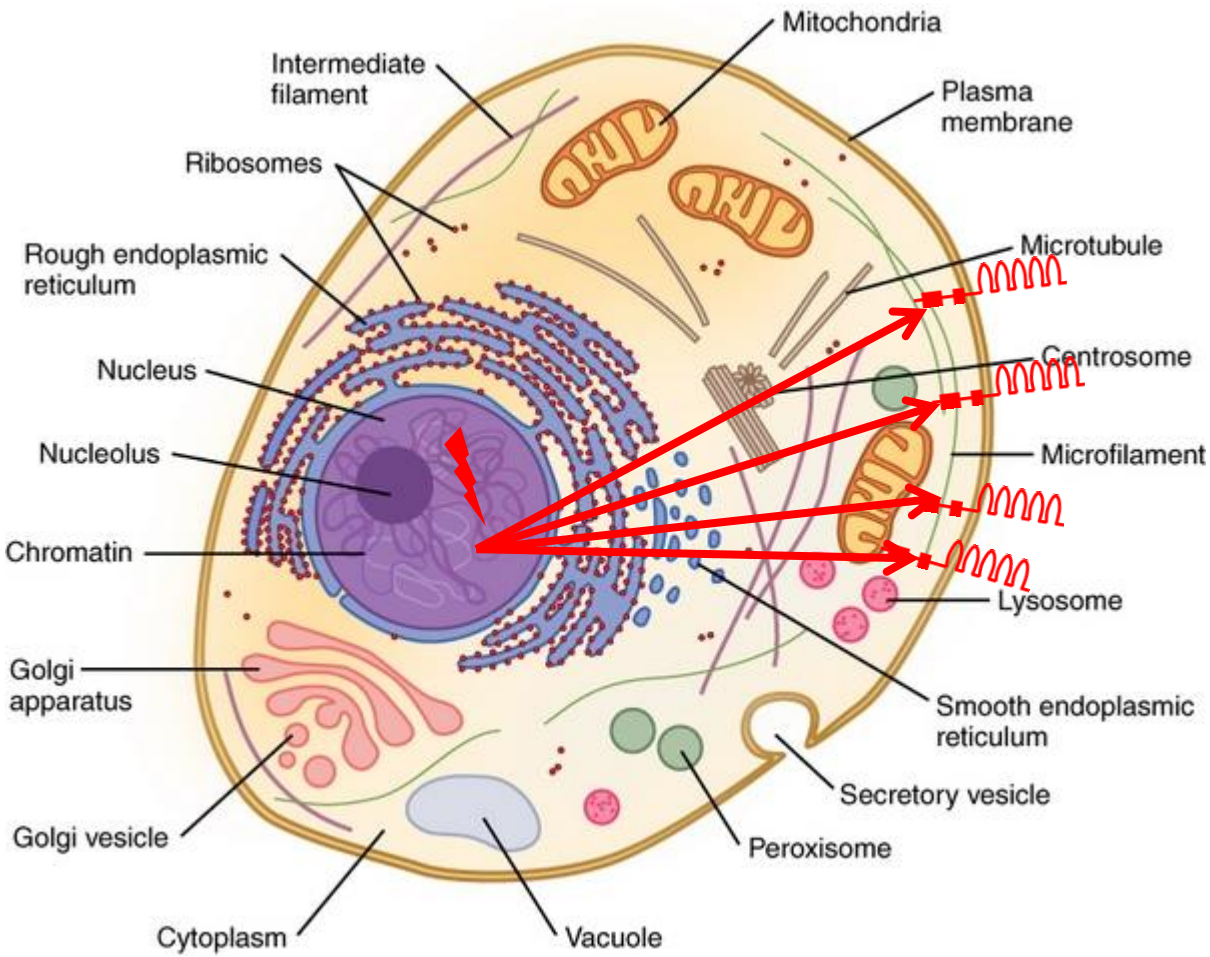
Die menschliche Zelle



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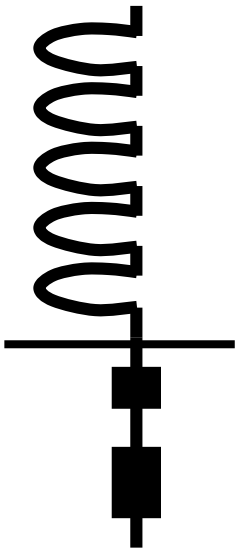
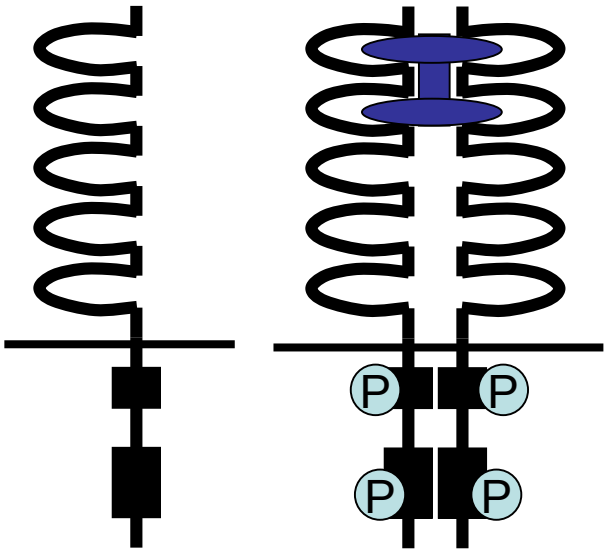
Molekularbiologie



KIT

Molekularbiologie



KIT

KIT
+ SCF

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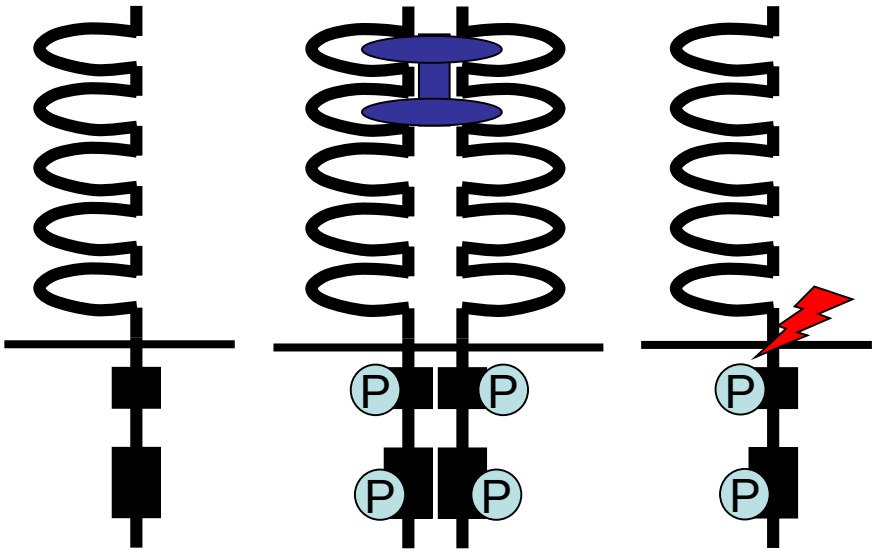
Erlangen

Molekularbiologie



KIT

KIT
+ SCF

Mutation

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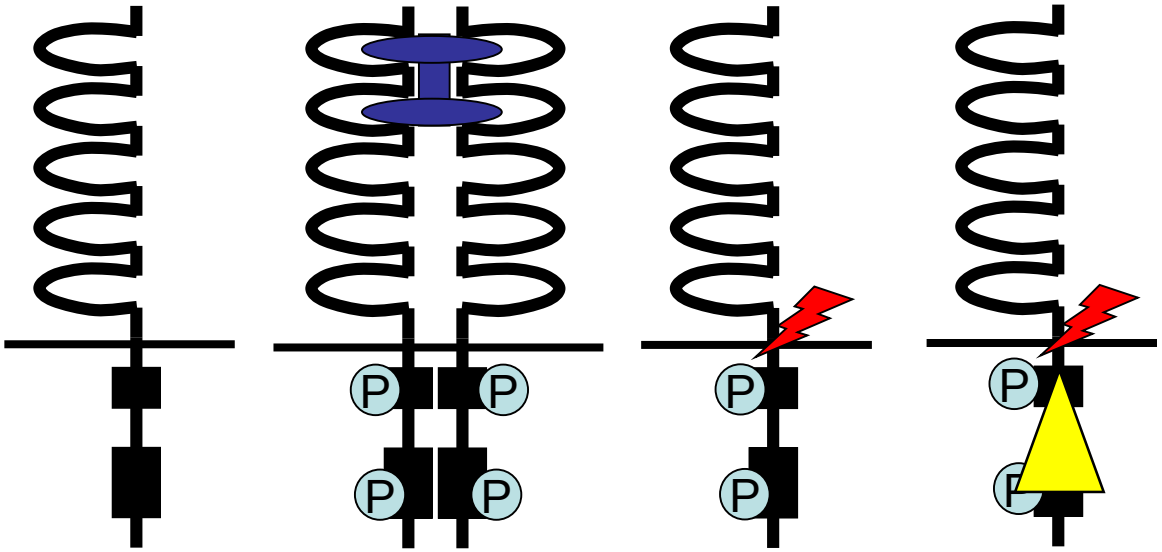
Erlangen

Molekularbiologie



KIT

KIT
+ SCF

Mutation

Mutation
+ imatinib

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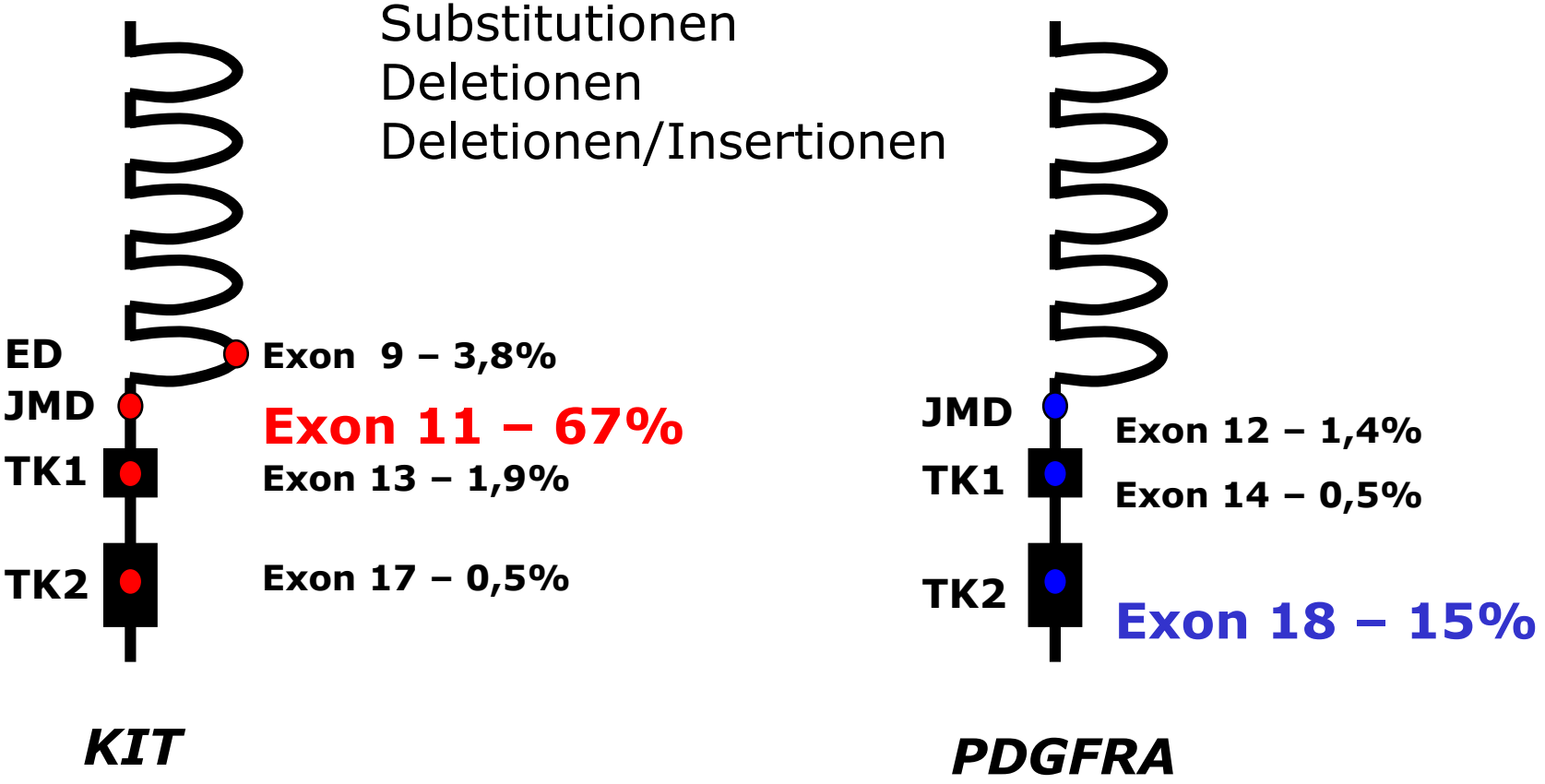
Mutationstypen der Gene *KIT* und *PDGFRA*



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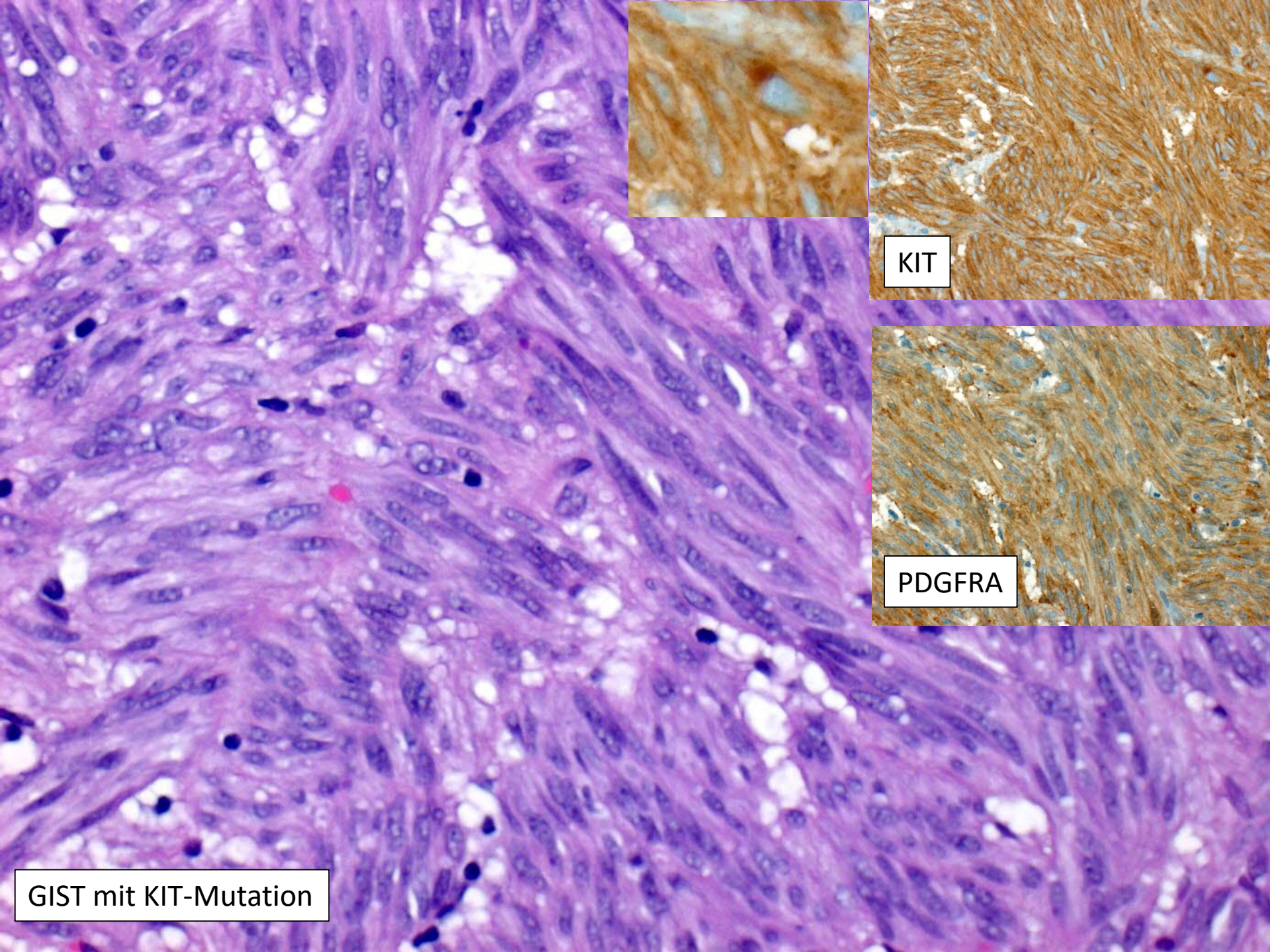
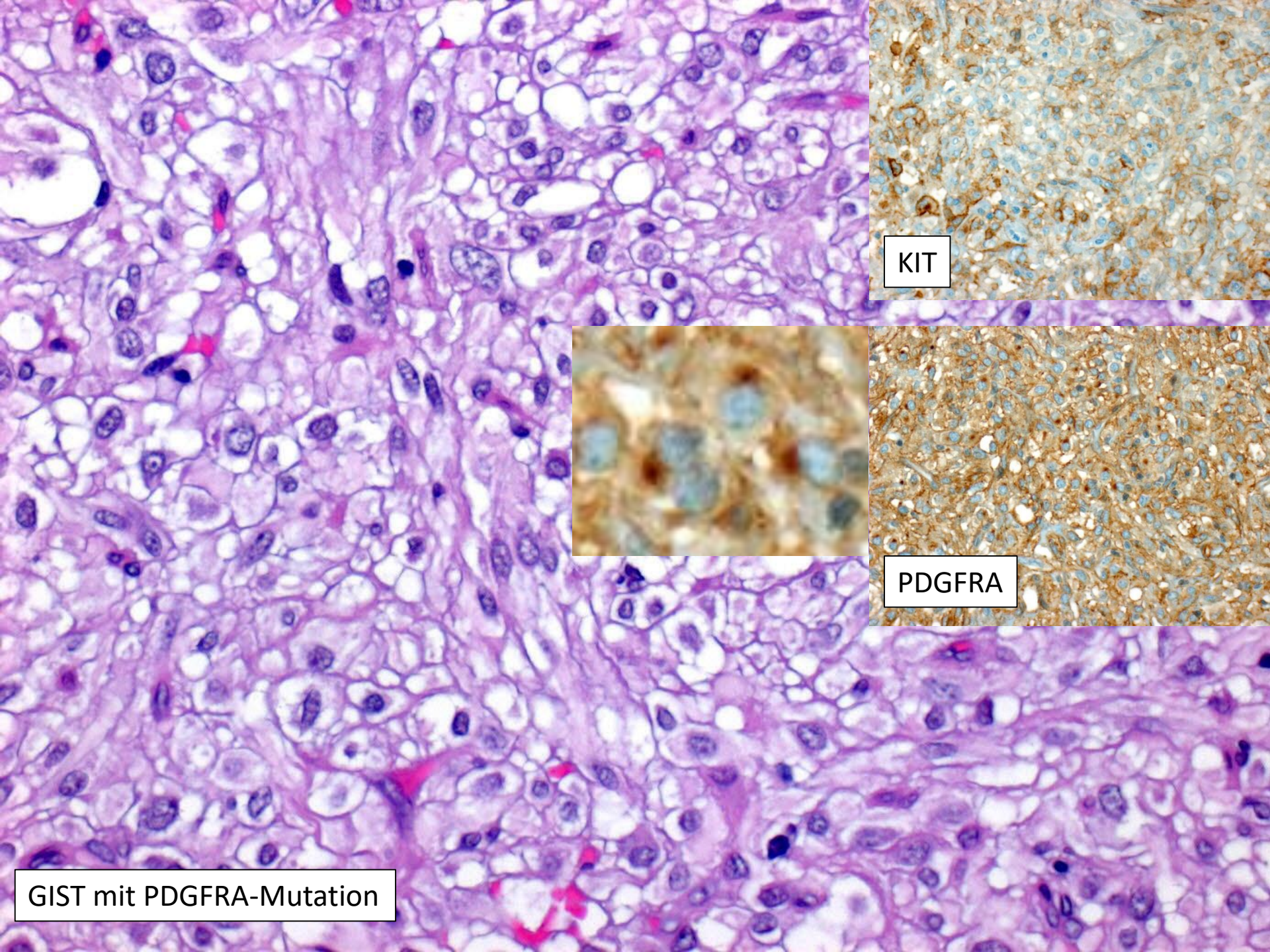
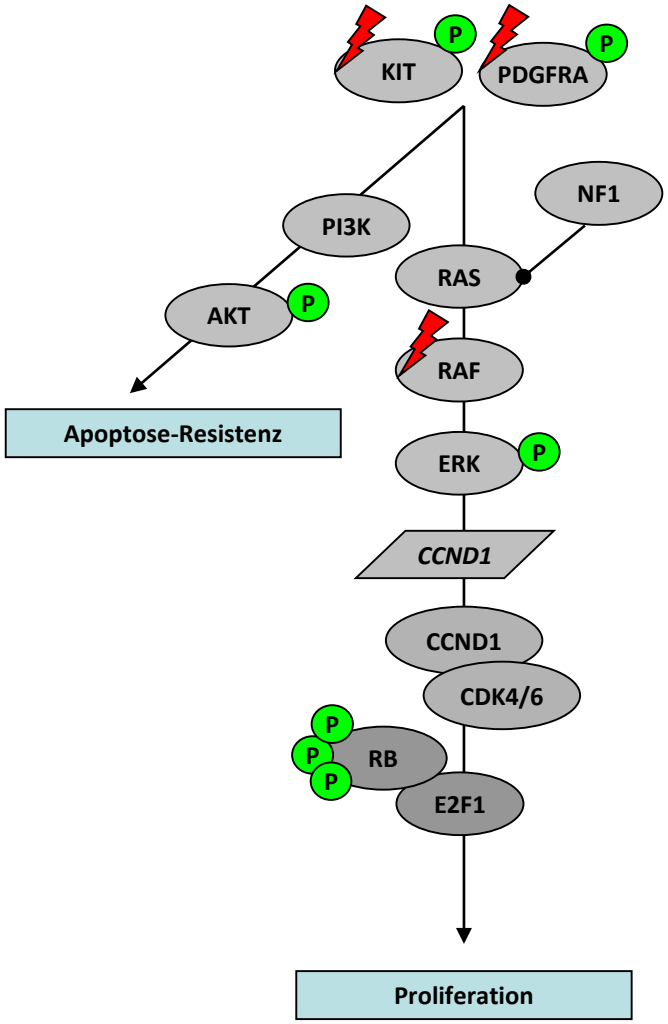

KIT
PDGFRA
GIST mit KIT-Mutation


KIT
PDGFRA
GIST mit PDGFRA-Mutation

Molekulare und klinische Subtypen bei GIST



Sporadische GIST:

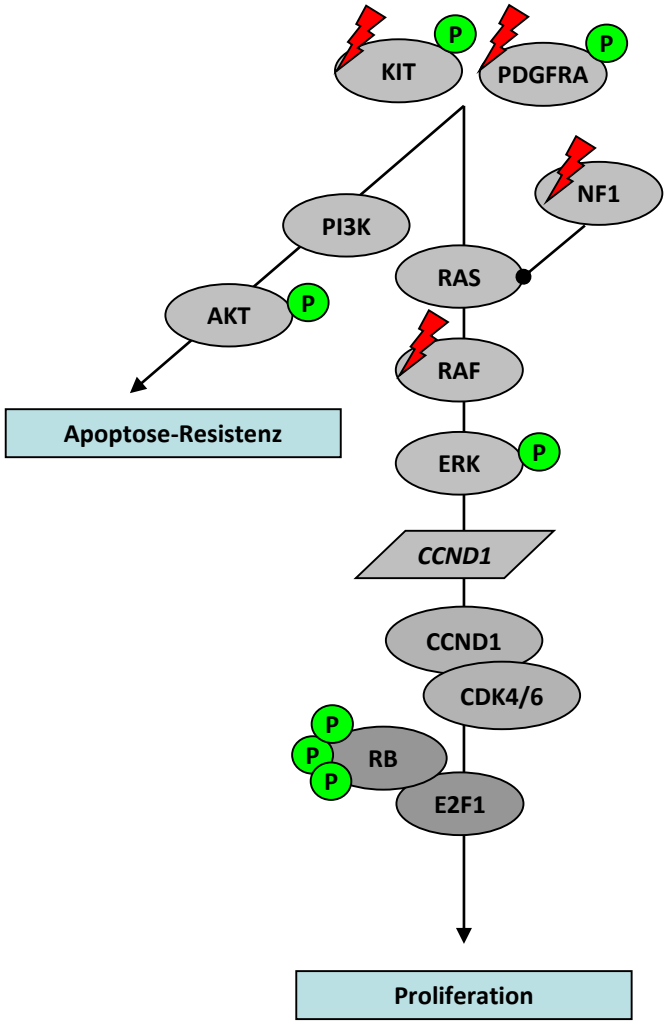
76 % KIT Mutation

15 % PDGFRA Mutation

1 % BRAF Mutation

8 % „Wildtyp“

Molekulare und klinische Subtypen bei GIST



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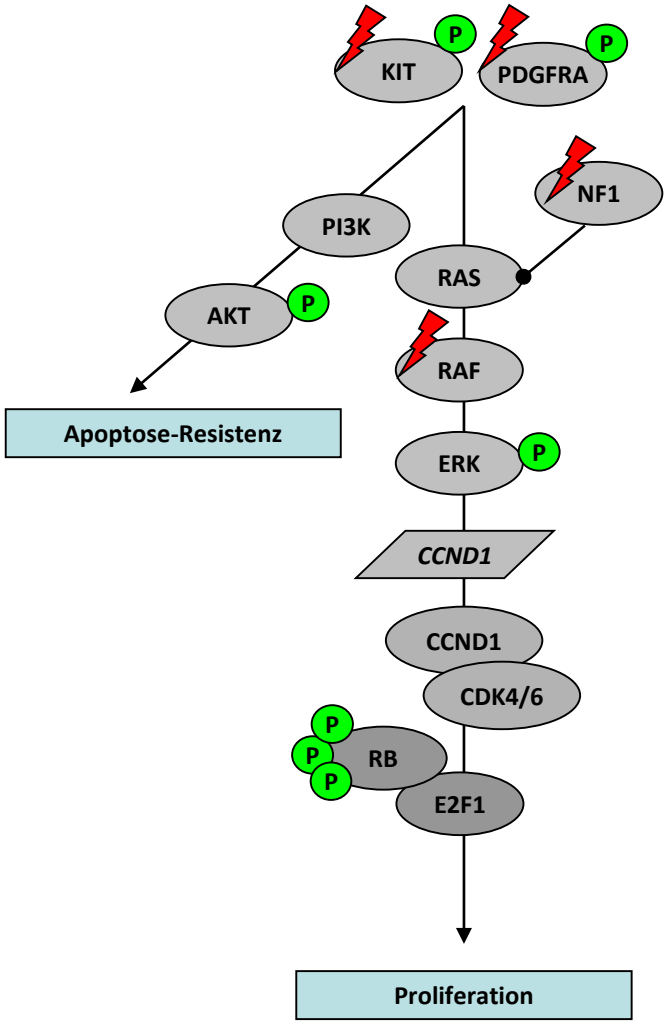
Syndromale GIST:

NF1-Mutation (Neurofibromatose Typ 1)

Molekulare und klinische Subtypen bei GIST



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Syndromale GIST:

NF1-Mutation (Neurofibromatose Typ 1)

SDH-negative GIST:

Carney-Stratakis Syndrom
GIST und Paragangliom

Carney-Trias
GIST und Paragangliom und Chondrom

Pädiatrische GIST

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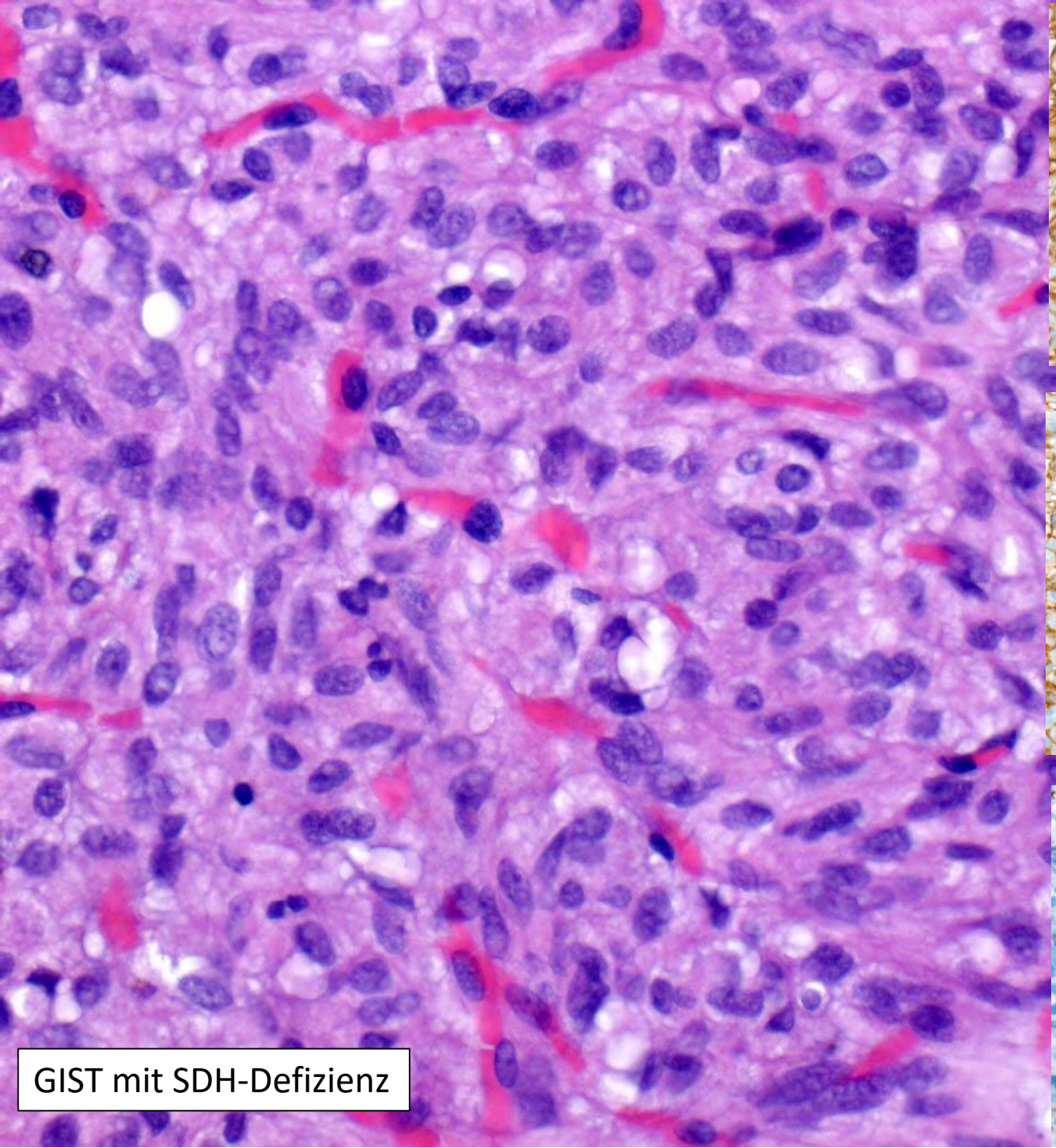
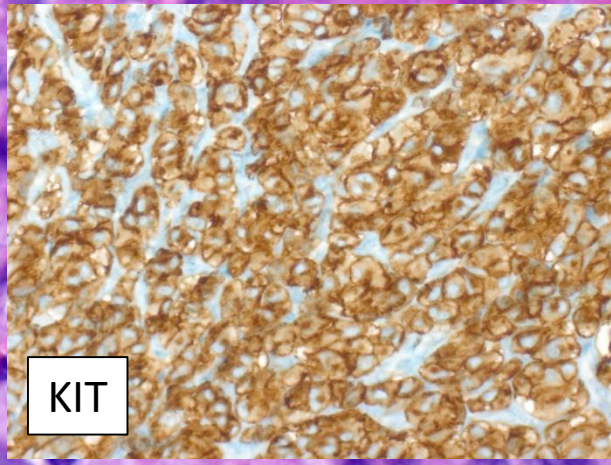
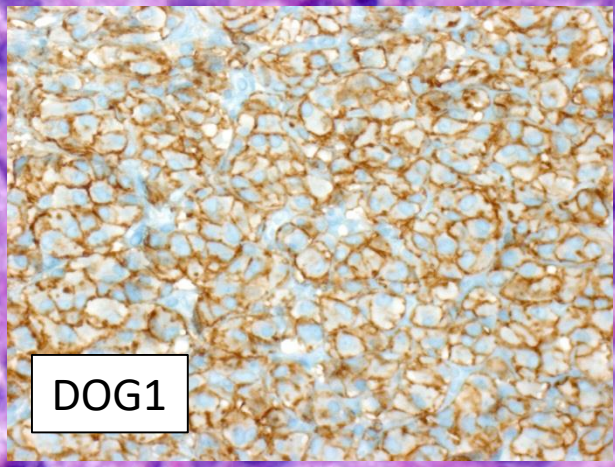
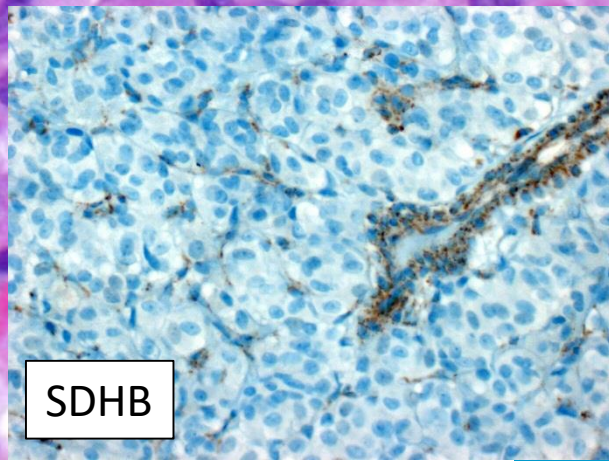
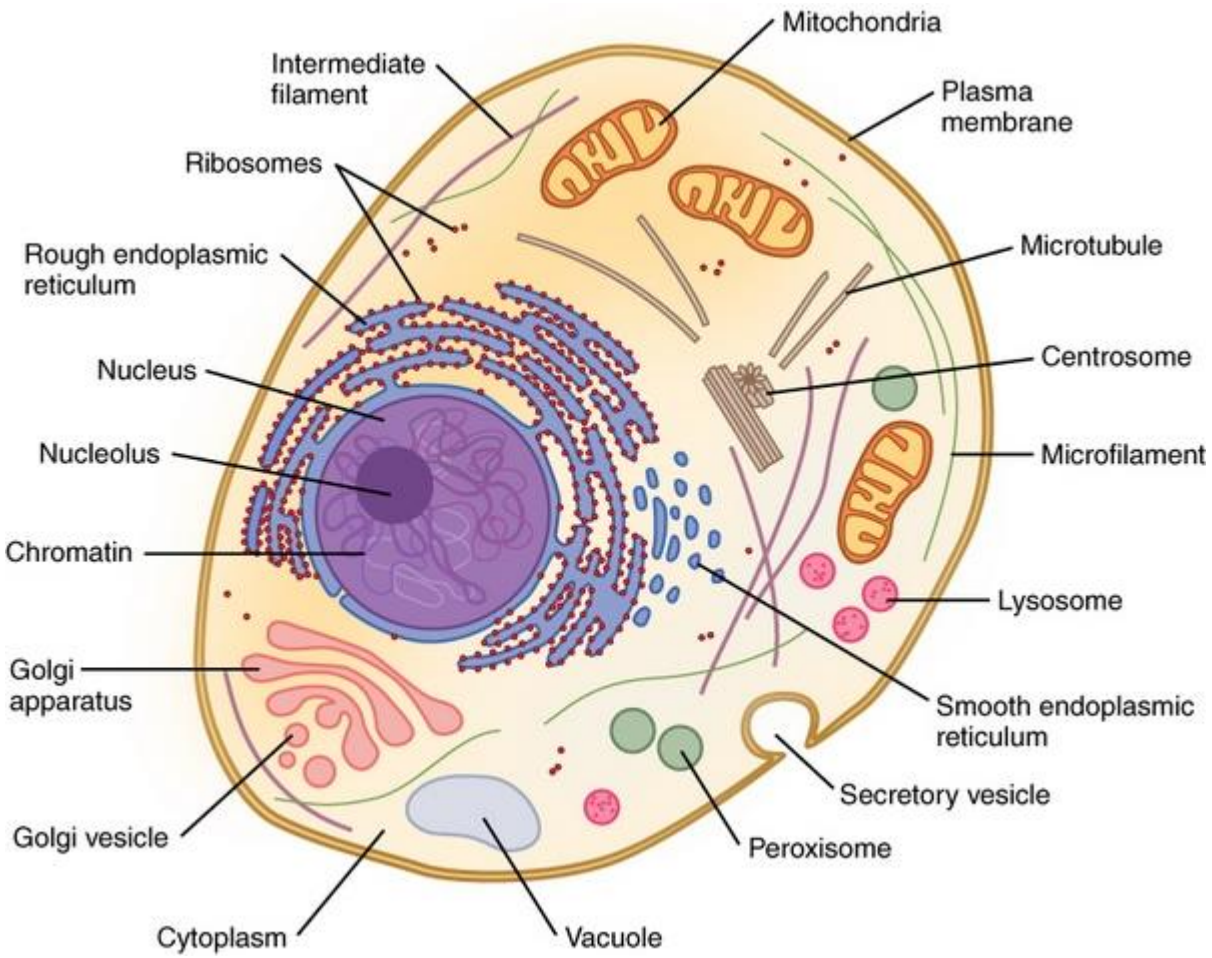

GIST mit SDH-Defizienz


KIT

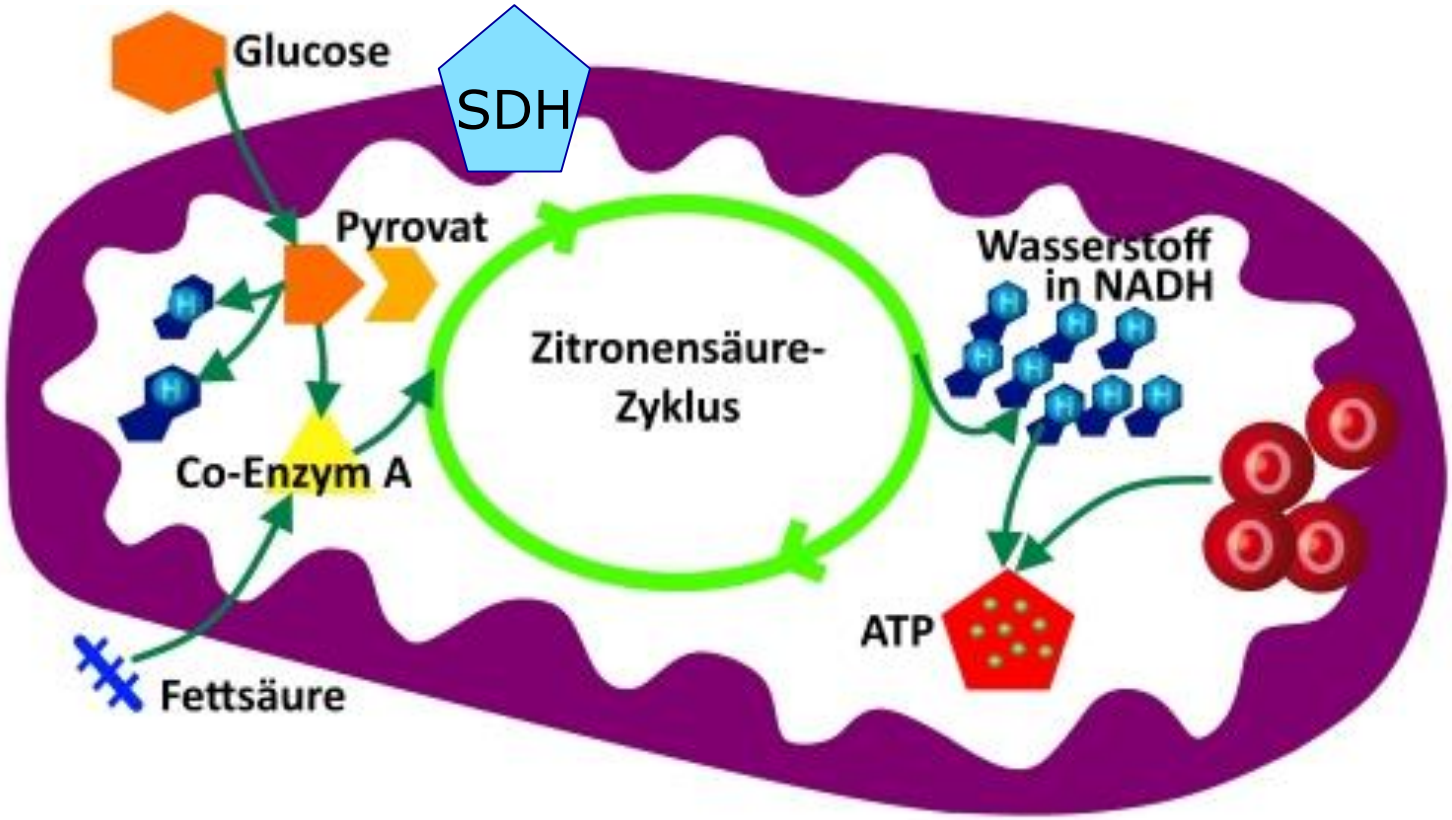

DOG1


SDHB

Die menschliche Zelle



Mitochondrien



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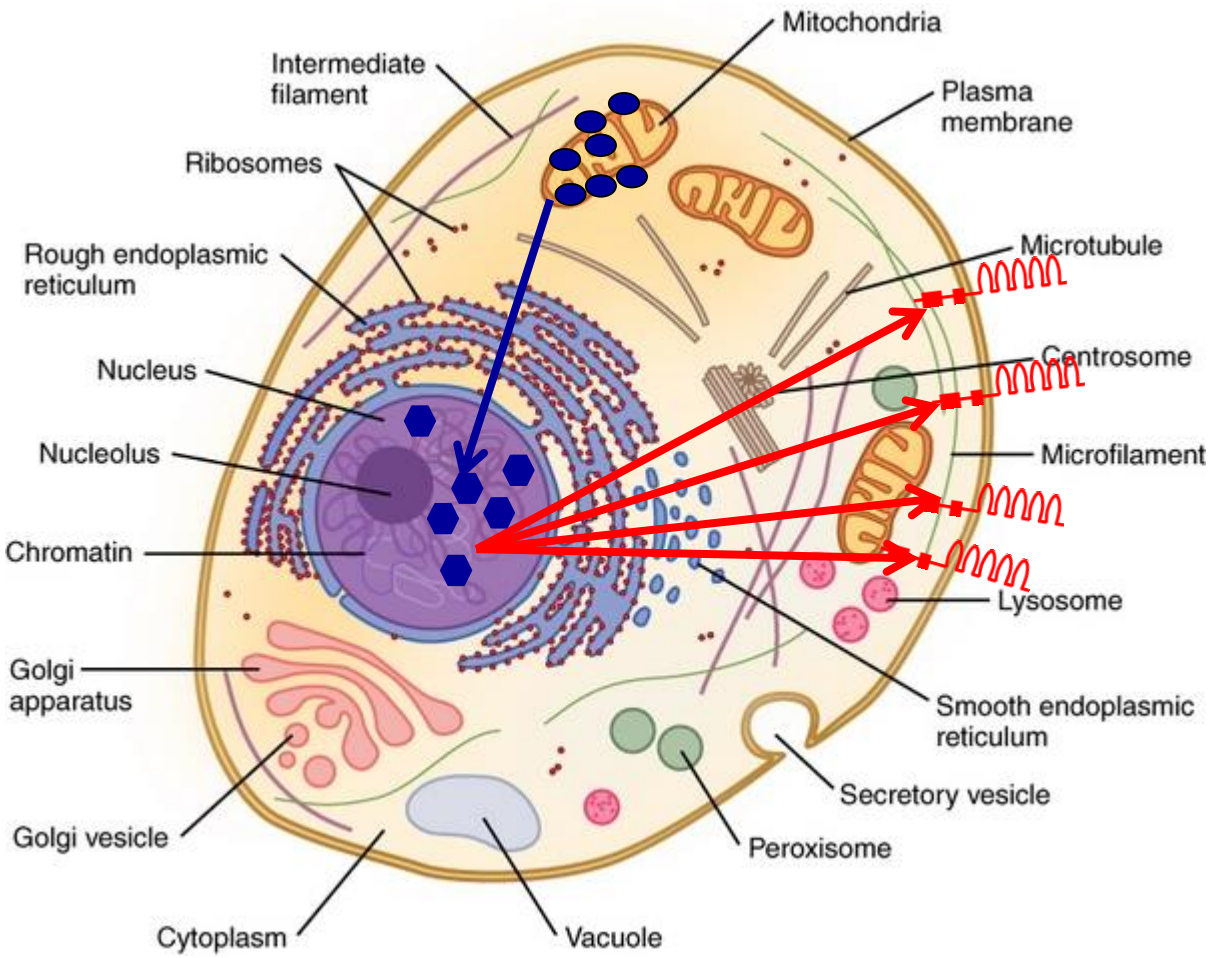
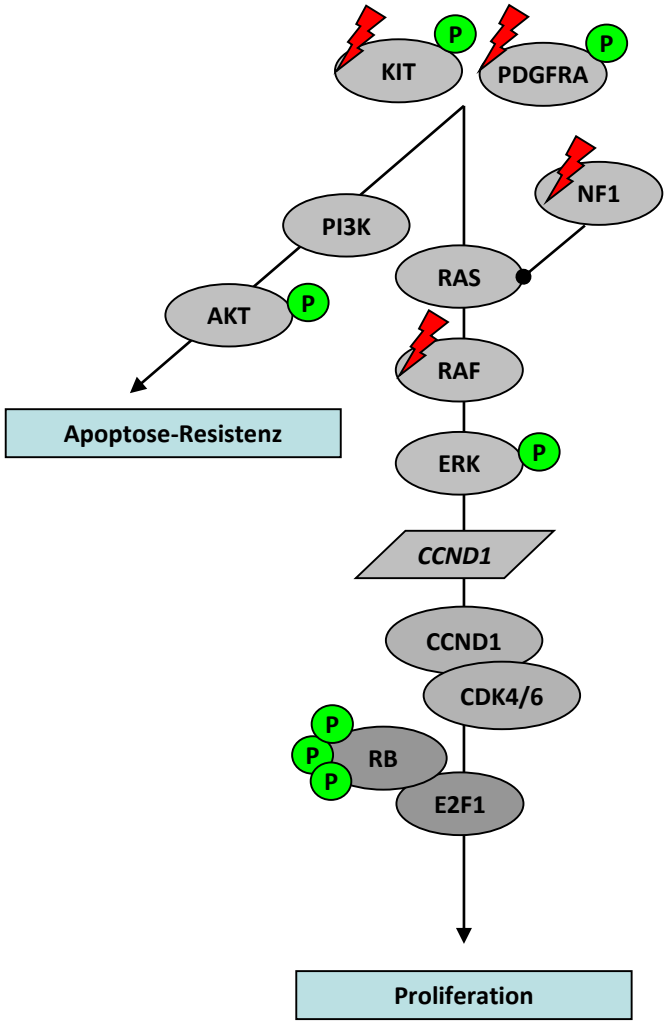
Die menschliche Zelle



Molekulare und klinische Subtypen bei GIST



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Syndromale GIST:

NF1-Mutation (Neurofibromatose Typ 1)

SDH-negative GIST:
Carney-Stratakis Syndrom
GIST und Paragangliom

Carney-Trias
GIST und Paragangliom und Chondrom

Pädiatrische GIST

Quadruple-negative GIST:
Nachweis von Genfusionen
FGFR1, NTRK3

Quadruple negative GIST

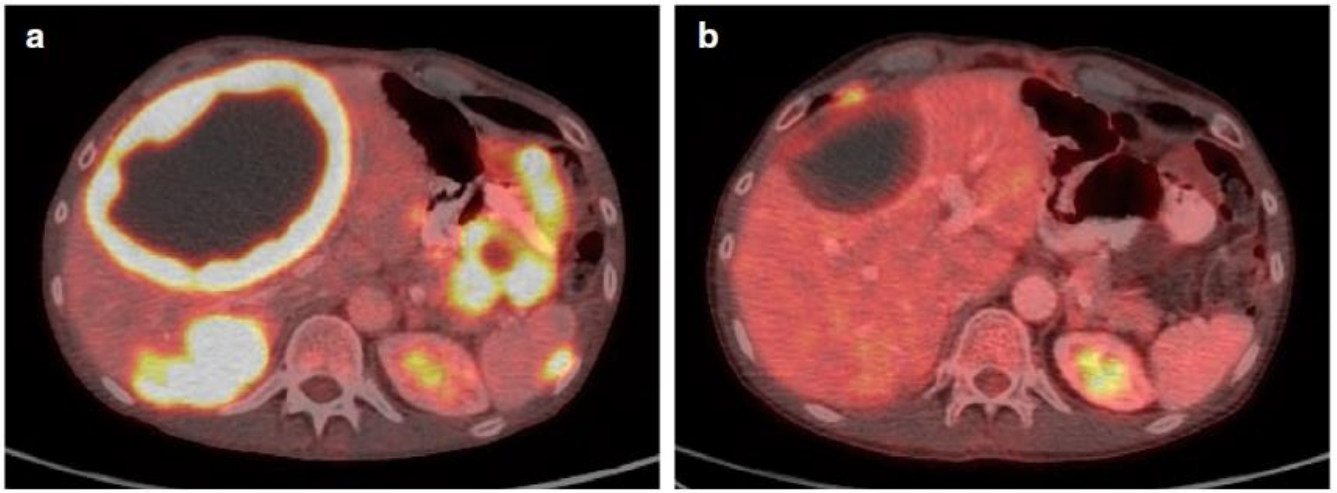


Fig. 4 Radiological response of a GIST possessing an ETV6–NTRK3 fusion following treatment with LOXO-101, a selective TRK inhibitor. A 55-year old male with a T3N0M1 small intestine GIST had progression of disease on five lines of tyrosine kinase inhibitors targeting KIT prior to identification of an ETV6–NTRK3 fusion in the tumor. He was enrolled on a Phase I clinical trial of oral LOXO-101 (Loxo Oncology, Stamford, CT), a selective TRK inhibitor. As compared to baseline PET/CT images (**a**), the tumors had decreased size and FDG-uptake at week 8 (**b**). At 4 months, the patient had ongoing partial response (44%) according to RECIST 1.1 criteria

FGFR1 and NTRK3 actionable alterations in "Wild-Type" gastrointestinal stromal tumors

Eileen Shi[1], Juliann Chmielecki[2], Chih-Min Tang[13], Kai Wang[2], Michael C. Heinrich[4,5], Guhyun Kang[5,6], Christopher L. Corless[5], David Hong[7], Katherine E. Fero[1,8], James D. Murphy[1,8], Paul T. Fanta[1,9], Siraj M. Ali[2], Martina De Siena[13], Adam M. Burgoyne[1,9], Sujana Movva[10], Lisa Madlensky[1,11], Gregory M. Heestand[1,9], Jonathan C. Trent[12], Razelle Kurzrock[1,9], Deborah Morosini[2], Jeffrey S. Ross[2], Olivier Harismendy[1,3*] and Jason K. Sicklick[1,13*]

Wann denke ich an einen syndromalen GIST?

- Junges Alter (<18 Jahre, <40 Jahre)
- KIT/PDGFRA Wildtyp-Sequenz
- Multifokales Wachstum
- Mehrere GIST, andere seltene Tumorerkrankungen
- Lymphknotenmetastasen
- Histologie, SDHB-negativ
- Familienanamnese, Eigenanamnese
  - GIST
  - „Leiomyosarkome"
  - Paragangliom
  - (Phäochromozytom)
  - Neurofibrome

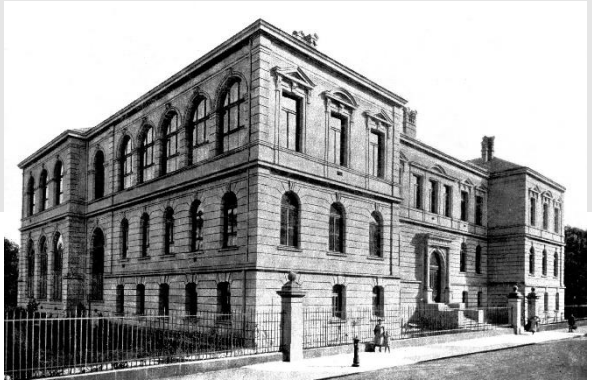
Was sollte bei Patienten mit Wildtyp-GIST zusätzlich gemacht werden?

- SDHB-Immunhistochemie
- Familienanamnese
- Eigenanamnese

- Referenzpathologie
  - Diagnose?
  - Mutationsanalyse korrekt?
  - Alle Exone getestet? (PDGFRA exon 14? BRAF?)
  - SDHB-Immunhistochemie

Vielen Dank für Ihre Aufmerksamkeit!

florian.haller@uk-erlangen.de



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