

Generating chordoma xenografts from the U-CH1 chordoma-derived cell line

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Generating chordoma xenografts

This would be a great benefit for the development and testing of new therapies for patients with chordoma.

We have had little success in generating chordoma xenografts reproducibly in CD1 nude mice from single cell suspension and tumour explants.

We found that xenografts may develop but they grow slowly and often disappear. After numerous attempts we consider that this is not a useful approach to developing xenografts.

NOD/SCID interleukin-2 receptor gamma chain null (Il2rg(-/-) mouse model

In a recent paper Quintana et al. showed that 91% (33/36) of primary malignant melanomas were generated when no more than 10 cells from patients with malignant melanoma were directly injected into mice.

(Quintana *et al*, 2008: Nature. 2008 Dec 4;456(7222):593-8).





NOD/SCID interleukin-2 receptor gamma chain null (Il2rg(-/-) mouse model

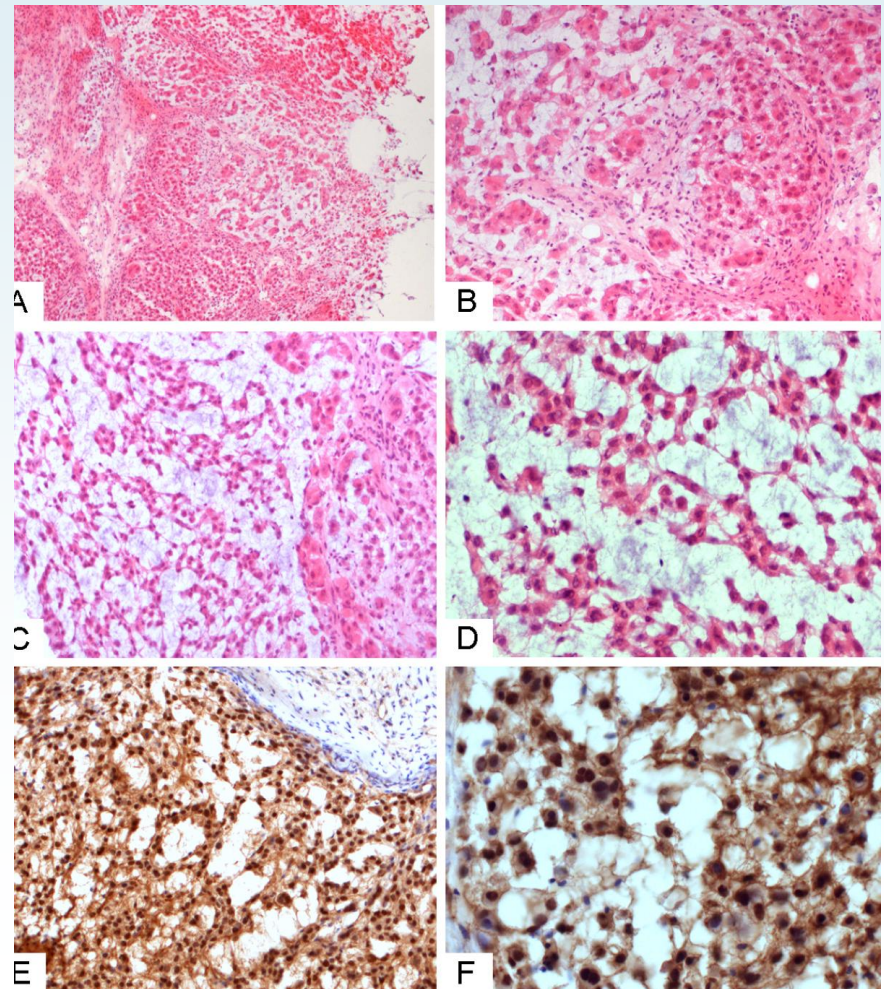
We injected 5 million cells of the chordoma-derived cell line, U-CH1 subcutaneously into NOD/SCID interleukin-2 receptor gamma chain null (Il2rg(-/-) mice.

Tumours appeared after 10 weeks and when harvested were successfully transplanted subcutaneously as a single cell suspension, after which xenografts formed.

Chordoma xenograft generated in NOD/SCID interleukin-2 receptor gamma chain null (Il2rg^{-/-}) mouse from the U-CH1 cell line.

A-D: haematoxylin and eosin-stained sections showing the typical features of a chordoma occurring in humans.

E&F: immunoreactivity for brachyury in xenograft generated from U-CH1 cell line: note strong nuclear.





Chordoma xenografts generated from the U-CH1 cell line have typical features of a human chordoma

- this model offers a means of asking biological questions which could benefit patients.
- Information about the U-CH1 cell line was originally published in: Genes Chromosomes Cancer. 2001 Nov;32(3):203-11. **Genome-wide analysis of sixteen chordomas by comparative genomic hybridization and cytogenetics of the first human chordoma cell line, U-CH1.** Scheil S, Brüderlein S, Liehr T, Starke H, Herms J, Schulte M, Möller P