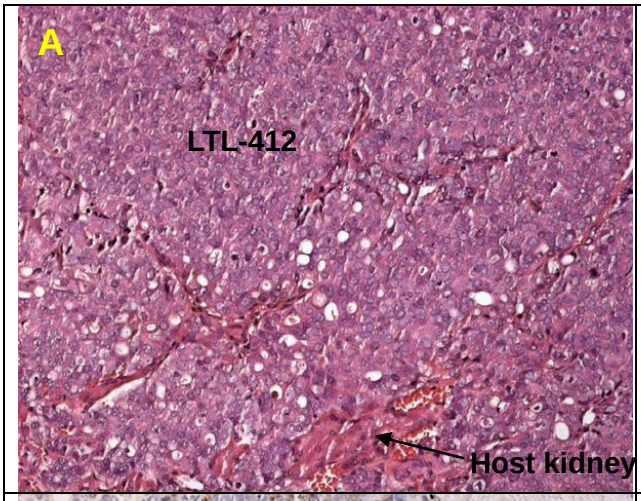
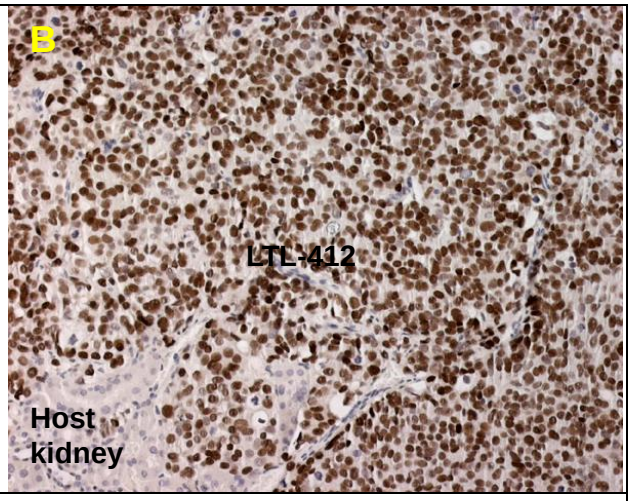
LTL-412 datasheet

Origin	Human prostate carcinoma	**Histopathology**	Adenocarcinoma
Year of establishment	2011	**Doubling time**	16-19 days (subrenal capsule graft site)
Local invasion	Limited	**Metastasis**	No
Hormone sensitivity	Partially androgen-dependent		

The LTL-412 tumor tissue line (Fig. 1) was developed from a patient's metastatic prostate adenocarcinoma (Fig. 2). When grafted under the renal capsules of NOD-SCID mice, the LTL-412 shows invasion into adjacent host kidney parenchyma without distant metastasis. Prostate-specific antigen (PSA) production of the LTL-412 *in vivo* is androgen-dependent (Fig. 3A). However, LTL-412 growth is partially androgen-dependent (Fig. 3B). Viable tissues of the LTL-412 in early generations have been preserved by cryopreservation (DMSO), and can readily be resurrected for grafting.





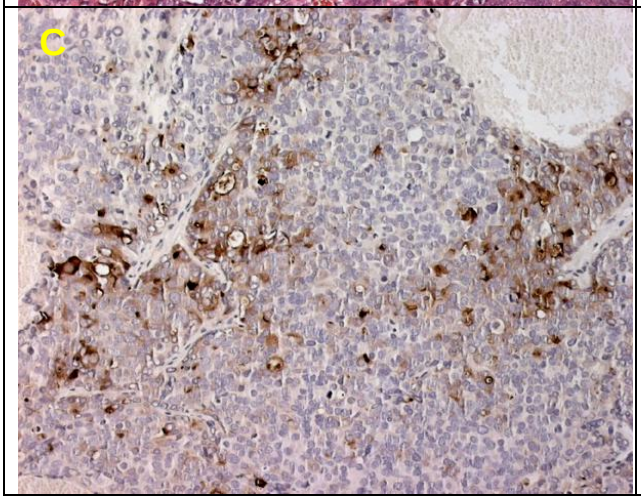


Fig. 1. (A). H&E stained LTL-412 tissue sections. The tumor cells grow in solid sheets. **(B-C).** The tumor cells show positive immunostains to human-specific (B) androgen receptor and (C) prostate-specific antigen (PSA). (x200)

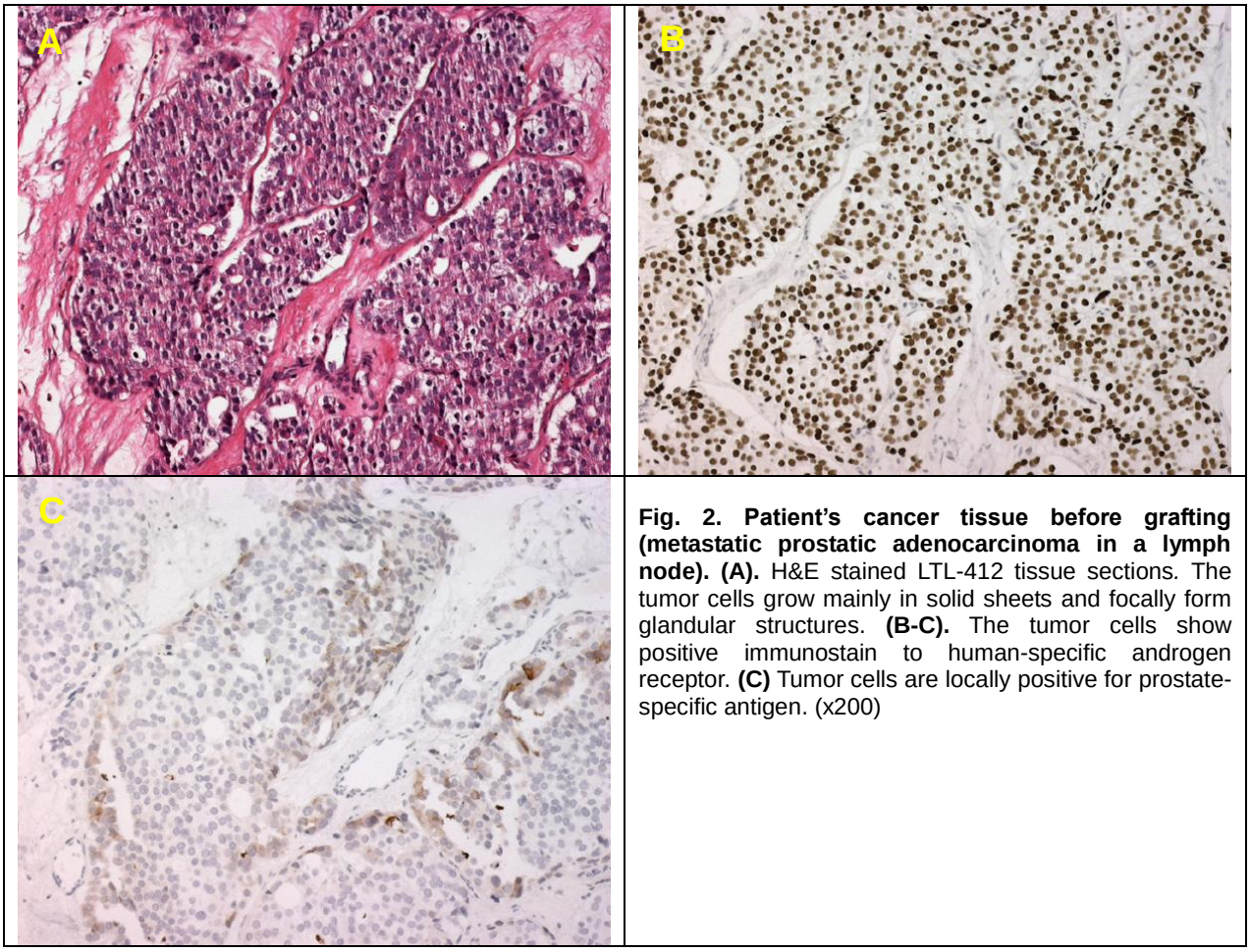


Fig. 2. Patient's cancer tissue before grafting (metastatic prostatic adenocarcinoma in a lymph node). (A). H&E stained LTL-412 tissue sections. The tumor cells grow mainly in solid sheets and focally form glandular structures. **(B-C).** The tumor cells show positive immunostain to human-specific androgen receptor. **(C)** Tumor cells are locally positive for prostate-specific antigen. (x200)

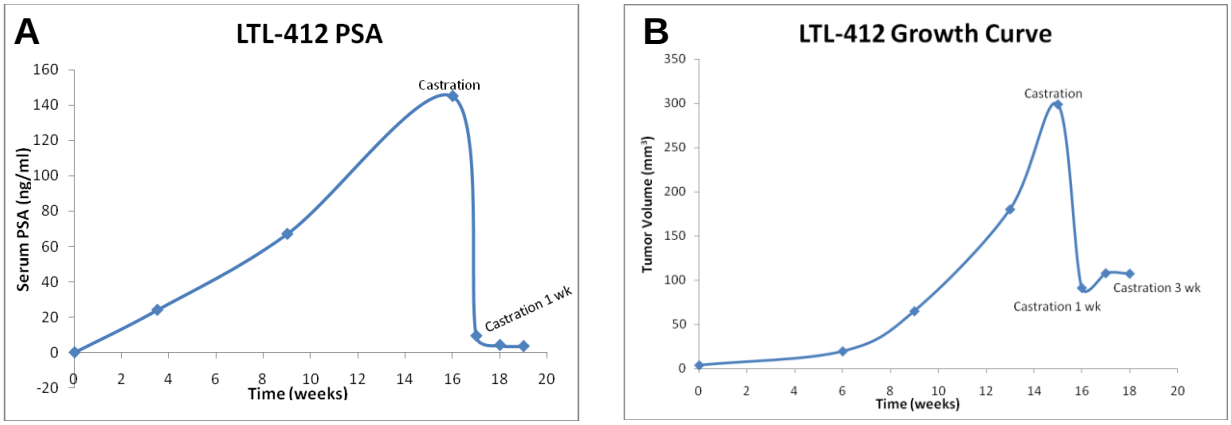


Fig. 3. LTL-412 shows an androgen-dependent PSA production and growth *in vivo*: (A) Serum PSA levels increase in intact mice following implantation of LTL-412 xenografts under the renal capsules. Castration (androgen ablation) quickly decreases serum PSA levels to very low concentrations. **(B)** Castration leads to major tumor shrinkage.

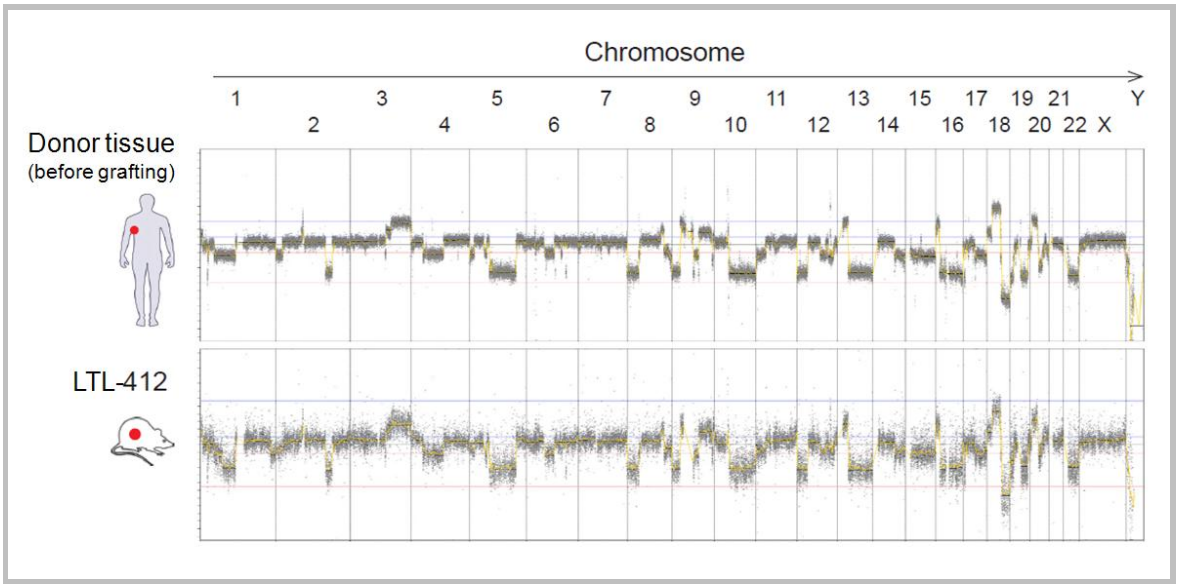


Fig. 4. Global aCGH profiles of LTL-412 and patient's cancer tissue before grafting. The chromosomal copy number profiles in the LTL-412 closely resembled the patient's cancer tissue, suggesting conservation of gross genome structure.

Applications

1. Pre-clinical evaluation of established and potential anticancer drugs. Examination of drug efficacy on tumor growth, cell death (apoptosis, necrosis), tissue invasion, metastasis (in combination with metastatic tumor lines) and angiogenesis.

2. Discovery of potential therapeutic targets and/or biomarkers for drug sensitivity.

3. Study of mechanisms underlying tumor growth, progression and metatasis (in combination with metastatic tumor lines).

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