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Gilloteaux, D.J.[a b c] , Jamison, J.M.[d e] , Summers, J.L.[d e] , Taper, H.S.[f]

Xenografts on nude mouse diaphragm of human DU145 prostate carcinoma cells: mesothelium removal by outgrowths and angiogenesis
(2022) *Ultrastructural Pathology*, 46 (5), pp. 413-438.

DOI: 10.1080/01913123.2022.2115596

[a] Department of Anatomical Sciences, St Georges' University International School of Medicine, KB Taylor Global Scholar's Program, Newcastle upon Tyne, NE1 8JG, United Kingdom
[b] Unit of Research in Molecular Physiology (URPhyM), NARILIS, Université de Namur, Namur, 5000, Belgium
[c] Department of Anatomical Sciences, Ohio Medical University, NEOMed/Northeastern Ohio, Universities College of Medicine, Rootstown, OH 44272, United States
[d] Department of Urology, Ohio Medical University, NEOMed/Northeastern Ohio Universities College of Medicine, Rootstown, OH 44272, United States
[e] St Thomas Hospital, The Apatone Development Center, Summa Research Foundation, Akron, OH 44310, United States
[f] Laboratoire de Pharmacologie Toxicologique et Cancérologique, School of Pharmacy, Université Catholique de Louvain, Brussels, 1200, Belgium

Abstract
Human prostate carcinoma DU145 cells, androgen-independent malignant cells, implanted in the athymic nu/nu male mouse, developed numerous tumors on peritoneal and retro-peritoneal organs whose growth aspects and vascular supply have yet to be investigated with fine structure techniques. A series of necropsies from moribund implanted mice diaphragms were examined with light, scanning, and transmission electron microscopy. DU145 xenografts installations, far away from the implanted site, were described as the smallest installation to large diaphragm outgrowths in moribund mice. Carcinomas did not show extracellular matrix and, reaching more than 0.15 mm in thickness, they revealed new structures in these outgrowths. Voids to be gland-like structures with mediocre secretion and, unexpectedly, intercellular spaces connected with fascicles of elongated DU145 cells that merged with a vascular supply originated from either the tumor cells and/or some perimysium vessels. In the largest carcinomas, most important vascular invasions coincidently accompanied the mouse lethality, similarly to human cancers. This androgen-independent model would be useful to study tumor outgrowth's changes related to testing anticancer strategy, including anti-angiogenic therapies involving toxicity, simultaneously with those of other vital organs with combined biomolecular and fine structure techniques. © 2022 Taylor & Francis Group, LLC.

Author Keywords
angiogenesis; blood supply; cytophagocytosis; DU145 carcinoma; mesothelium; Prostate

Index Keywords
androgen; animal, carcinoma, diaphragm, epithelium, human, male, mouse, nude mouse, pathology, prostate, prostate tumor, tumor cell line, xenograft; Androgens, Animals, Carcinoma, Cell Line, Tumor, Diaphragm, Epithelium, Heterografts, Humans, Male, Mice, Mice, Nude, Prostate, Prostatic Neoplasms

Correspondence Address
Gilloteaux D.J.; Department of Anatomical Sciences, Drill Hall 013, Northumberland Road, United Kingdom; email: jgilloteaux@sgu.edu

Publisher: Taylor and Francis Ltd.

ISSN: 01913123
CODEN: ULPAD
PubMed ID: 36165802
Language of Original Document: English
Abbreviated Source Title: Ultrastruct. Pathol.
2-s2.0-85139131833
Document Type: Article
Publication Stage: Final
Source: Scopus