MODELLO SCHEDA RELAZIONE DOTTORANDI

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Attività scientifica svolta nel 1° anno di Dottorato, Anno Accademico 2015/2016 (XXXI° ciclo)

(massimo 2000 caratteri totali, spazi inclusi)
Descrivere brevemente la propria ricerca, suddividendola in
Titolo: Investigating the benefit of combined androgen deprivation therapy and radiotherapy in prostate cancer

- Introduzione
In prostate cancer(PCa),a survival benefit is evident when long-term adjuvant androgen deprivation therapy (LTADT) is added to concurrent ADT and external beam radiotherapy(1)(2),but the timing and duration of ADT are still critical(3).
Though hypoxia interferes with the fixation of DNA damage,laying the basis for radioresistance(4),the impact of hypoxia on PCa progression following prostatectomy or radiotherapy is poorly understood.So,the link between radiotherapy,ADT and hypoxia is essential in the comprehension of PCa and further studies are quickly required.

- Metodiche utilizzate
LNCaP and LNCaP R-bic(continuous exposure to20μM R-bicalutamide)cell lines were used.
Up to now,cells are kept in continuous hypoxic conditions(1%O_2) for13weeks.Chronic hypoxia-conditioned cells will be establish at6months of continuous exposure(5).Normoxic samples were run in parallel.
Methods performed:

- 3D culture(pellet culture system,(6))
- Real-Time PCR(AR,PSA,HIF-1α,SLUG,SNAI1)
- WB(e-cadherin,AR,PSA,Fibronectin,Twist,Vinculin)
- Prostasphere formation assay(7)

- Risultati ottenuti At the time of drawing this text,all experiments were performed once or are still ongoing.I've just started the characterization of hypoxic PCa cells lines,to evaluate the differences with their normoxic counterparts.I thought about experiments that could cover different fields of knowledge.Periodic extraction of RNA and proteins let me monitor the developing modifications concerning EMT processes(SNAI, SLUG expression levels by Real-Time PCR;e-cadherin protein by WB).Then,as it's reported that hypoxia switchs on a stemness genes signature,I set up the prostasphere formation assay(now I have obtained the primary spherical population).Furthermore,I investigated fluctuations of AR and PSA(one of its crucial target gene)expression in hypoxia.Finally,as in practical routine I noticed that hypoxic cells acquires a stronger adhesive capability,I will investigate the cellular adhesion

mechanisms altered in hypoxia(Vinculin, fibronectin, twist,e-cadherin protein detection by WB).

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• Abstracts e partecipazione a congressi e corsi: autori, titolo della presentazione, nome e date del congresso

• Pubblicazioni scientifiche: autori, titolo della pubblicazione, nome e numero della rivista, anno di pubblicazione

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• Eventuali soggiorni in altri laboratori italiani o esteri

3/10/2016