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Introduction:

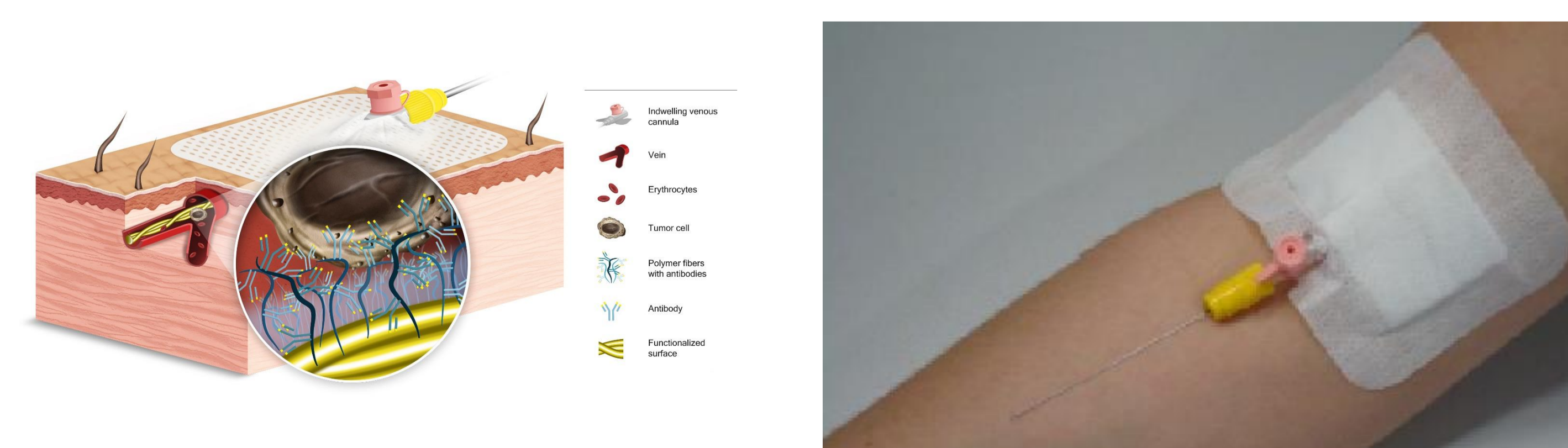
- Lung Cancer has high recurrence rate even in early stage diagnosis.
- Biopsy is currently the procedure of choice for the investigation of pulmonary lesions, yet it is unclear whether the biopsy itself releases tumor cells into the circulation and attributes to the late distal recurrence.
- Studies of various malignancies show the ability to identify circulating tumor cells (CTC) even in early stage cancer. The number of CTC correlates with disease outcome.

Aim :

- To quantify tumor cell spillage after nodule biopsy in early lung cancer.

Methods:

- Patients with pulmonary nodules undergoing CT-biopsy were enrolled.
- GILUPI CellCollector® (GILUPI, Germany) was used for CTC detection before and after the procedure. Patients served as their own controls.
- This filtration device isolates CTC in-vivo through a standard cannula inserted to the cubital vein for thirty minutes via epithelial cell adhesion molecule antibodies.



Results:

- 13 patients were enrolled to between 02/2016 and 08/2016.
- Five patients were excluded due to partial procedure.
- Eight patients were eligible for analysis:
 - Three had benign diseases (Granuloma, Interstitial pneumonitis)
 - Five had lung cancer (Adenocarcinoma -4; Squamous-1) All 5 patients were male, with a median age of 65 years (range 54-72), 4 of them were past smokers and one never smoker.
- No adverse events were reported.

No.	Age	Smoker	Stage	Histology	CTC before Bx	CTC after Bx
1	54	Yes	IV	Adenocarcinoma	0	2
2	65	Yes	IIIA	Adenocarcinoma	0	3
3	58	Yes	IIIB	Adenocarcinoma	2	8
4	72	No	I	Adenocarcinoma	8	2
5	70	Yes	IV	Squamous cell	5	2

Conclusions :

- With the limitation of low number of participants, this preliminary data shows that trans thoracic biopsy may increase CTC in some patients with lung cancer.

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