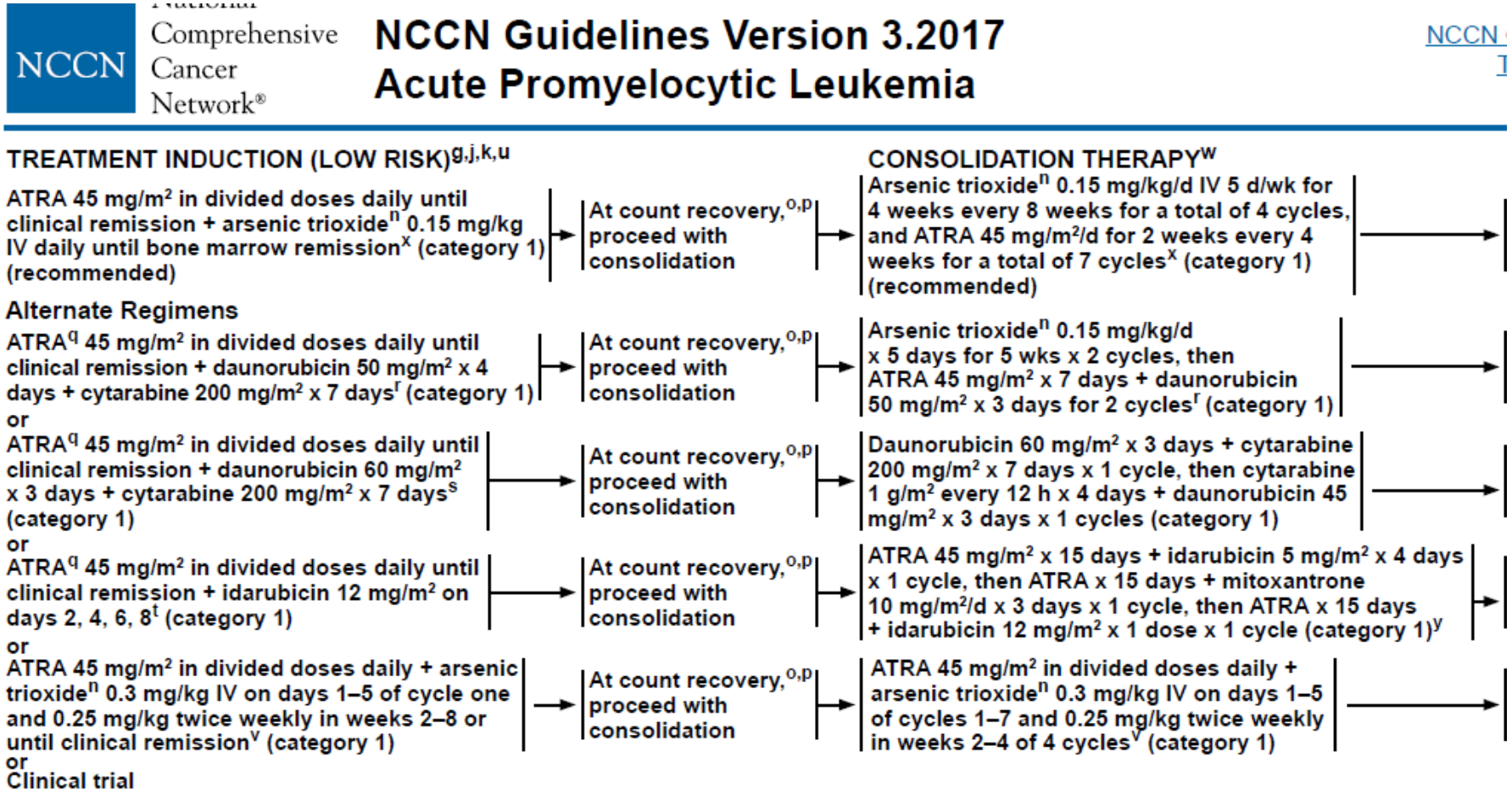
The Real World of Arsenic Uses in Chinese with Acute Promyelocytic Leukemia: a Cross-sectional Survey.

Hong-Hu Zhu

Peking University Institute of Hematology（PUIH）
Peking University People's Hospital, Beijing, P.R.C.

Arsenic as first-line treatment recommended by NCCN



Arsenic as first-line treatment recommended by China APL Guideline(2014)

中华血液学杂志 2014 年 5 月第 35 卷第 5 期 Chin J Hematol, May 2014, Vol. 35, No. 5

·标准与讨论·

中国急性早幼粒细胞白血病诊疗指南(2014 年版)

中华医学会血液学分会 中国医师协会血液科医师分会

Chinese guidelines for diagnosis and treatment of acute promyelocytic leukemia (2014) *Chinese Society of Hematology, Chinese Medical Association, Chinese Medical Doctor Association*

Corresponding author: Ma Jun, Email: mjun@csco.org.cn

急性早幼粒细胞白血病(APL)是一种有着特异核型改变的特殊类型急性白血病。临床表现凶险,起病及治疗过程中容易发生出血和栓塞而引起死亡。近二十年来,由于全反式维甲酸(ATRA)及砷剂的临床应用,APL 已成为可以治愈的白血病之一。APL 易见于中青年人,平均发病年龄为 39 岁,流行病学研究证实国外 APL 发病率占同期白血病的 5.0%–23.8%,占急性髓系白血病(AML)的 6.2%–40.2%。国内多位学者报道发病率占同期白血病的 3.3%–21.2%。

第一部分 初诊患者入院检查、诊断

一、病史采集及重要体征

1. 年龄。

2. 此前有无血液病史(主要指骨髓增生异常综合征、骨髓增殖性肿瘤等)。

3. 是否为治疗相关性(包括放疗、化疗)。

4. 有无重要脏器功能不全(主要指心、肝、肾功能)。

二、实验室检查

实验室检查的目的是为诊断、治疗方案选择、疗效分析、预后分析和复发预测提供依据。

1. 血常规、血生化和出凝血:

(1)血常规:WBC、HGB 和 PLT 的检测对于诊断和预后分析具有重要意义。

(2)血生化:常规生化电解质、肝肾功能。

(3)出凝血:由于 APL 极易发生出血,因此需要检测出凝血指标,如纤维蛋白原定量(Fg)、凝血酶原时间(PT)、活据颗粒的大小将 APL 分为:①M_{3}(粗颗粒型):颗粒粗大,密集或融合染深紫色,可掩盖核周围甚至整个胞核;②M_{3v}(细颗粒型):胞质中嗜苯胺蓝颗粒密集而细小,核扭曲、折叠或分叶,易与急性单核细胞白血病混淆;③M_{3v}(微颗粒型):少见,易与其他类型 AML 混淆。

(2)细胞化学:APL 的细胞化学具有典型特征,表现为过氧化酶强阳性,非特异性酯酶强阳性,且不被氟化钠抑制,碱性磷酸酶和糖原染色(PAS)呈阴性或弱阳性。

(3)组织病理学:对于高凝状态下的 APL 患者可通过骨髓活检,在 HE 染色和组织化学染色下诊断。

3. 细胞遗传学:包括常规染色体和荧光原位杂交(FISH)检测。二种技术可检测约 90%典型的 t(15;17)和约 5%不典型易位,如 t(11;17)、t(5;17)、15q24 异常和 17q21 等。5%的 APL 患者核型正常。常规染色体检测还可发现除 t(15;17)以外的染色体异常。FISH 可快速报告,利于尽早靶向治疗。

4. 免疫分型:多参数流式细胞仪(MPFC)检测,典型的 APL 表达 CD13、CD33、CD117 和 MPO,不表达或弱表达 CD3、CD7、CD14、CD64、HLA-DR、CD34、CD56。部分治疗后和复发的患者部分免疫表型发生改变,如 CD2、CD34 和 CD56 等。由于 MPFC 检测快速、特异、敏感,其可与实时定量 PCR(RQ-PCR)检测结合用于 APL 患者的诊断和微小残留病(MRD)的检测。

5. 分子生物学:

(1)PML-RARα融合基因:RQ-PCR 可检出 99% APL 患者的 PML-RARα 融合基因,APL 患者 99%存在着 PML-RARα融合基因,检测 PML-RARα融合基因是诊断 APL 的最特异、敏感的方法之一,也是 APL 治疗方案选择、疗效分析、预后分析和复发预测最可靠的指标。但仍有 1%的 APL 患者可出现假阴性。

(2)基因突变:部分 APL 患者可伴有 FLT3-ITD 突变。

Question

How many APL patients have received the treatment according to guideline of ELN, NCCN or China ?

Objective

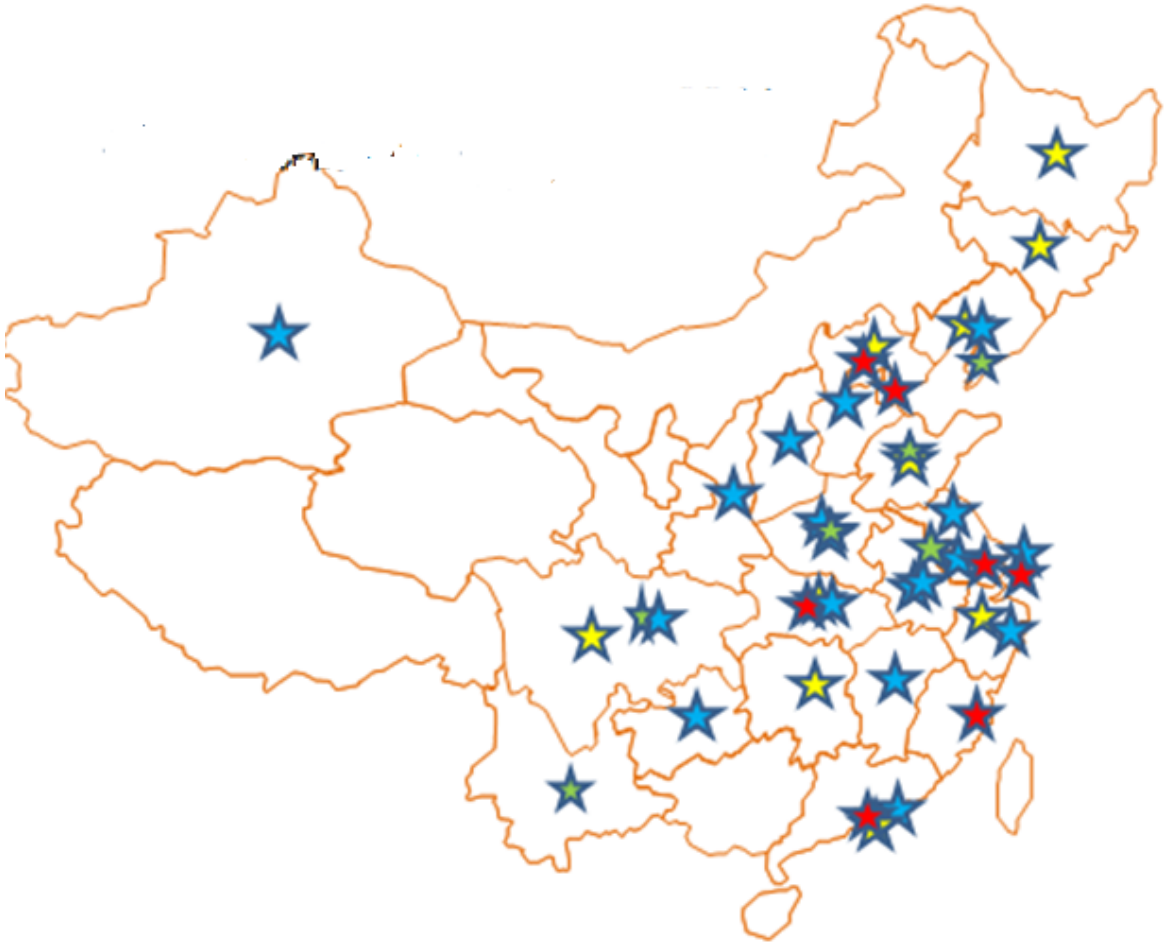
- We aimed to evaluate the usage of arsenic and assess the current status of the treatment of APL in China.

Methods

- Noninterventional, cross-sectional survey using electronic questionnaires distributed to APL patients and answered anonymously.

The patients distribution in China

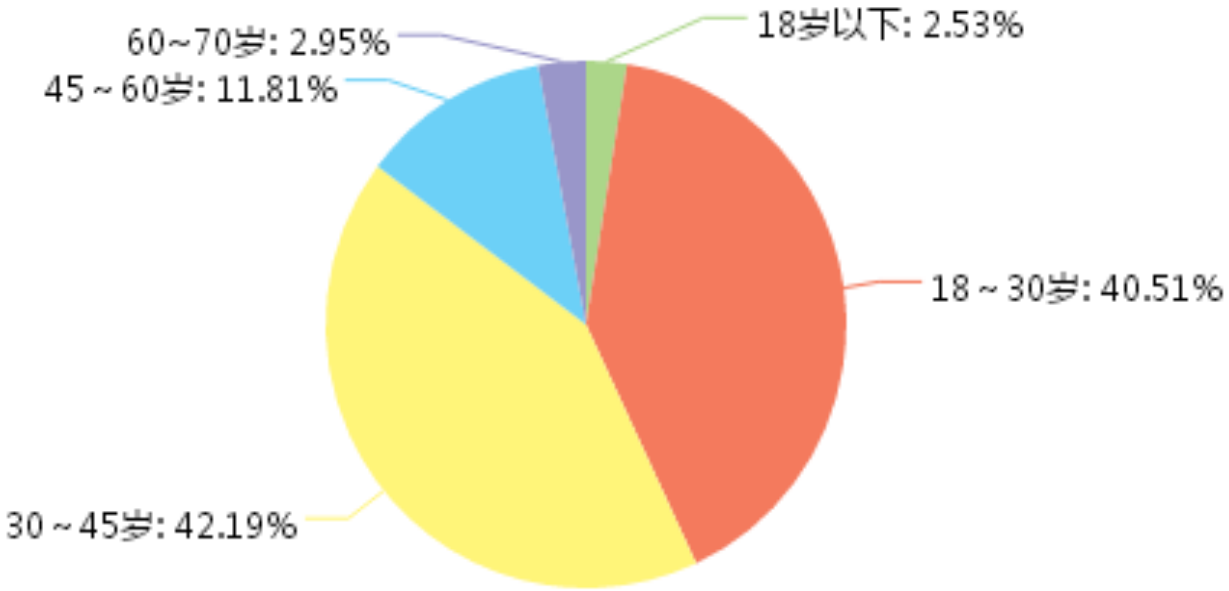
N=237 , 28 of 34 provinces and municipalities



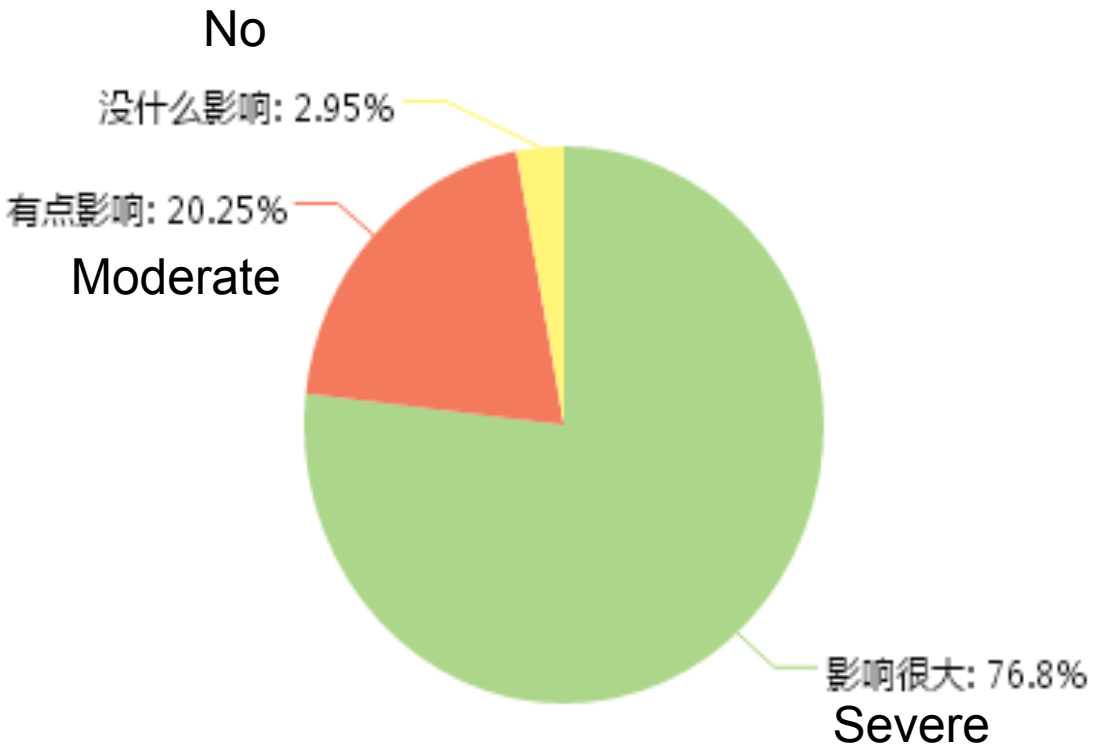
Results

- 120 respondents (50.6%) were male
- Median age was 40 years (range 15-68 years).
- Median time from diagnosis to this survey was 15 months.

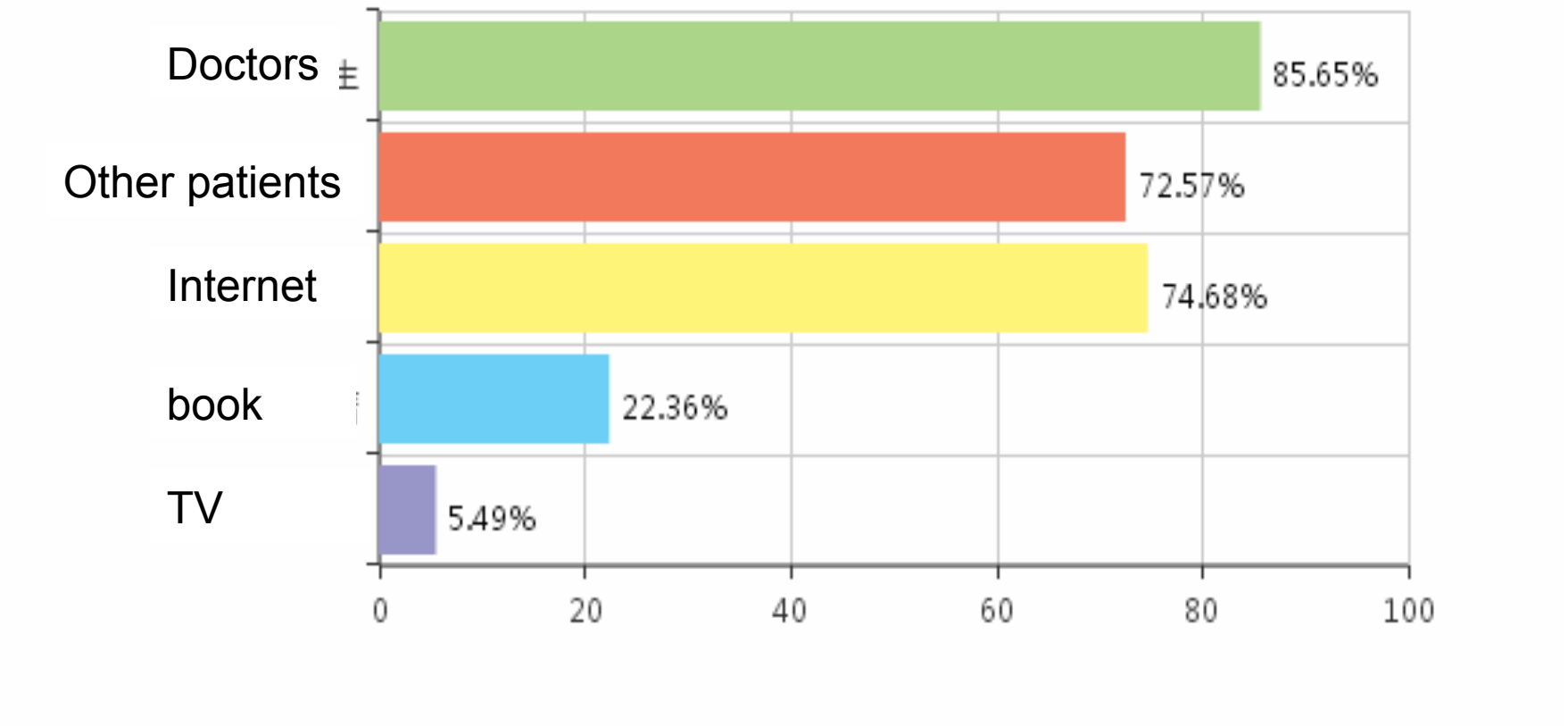
The age of APL patients



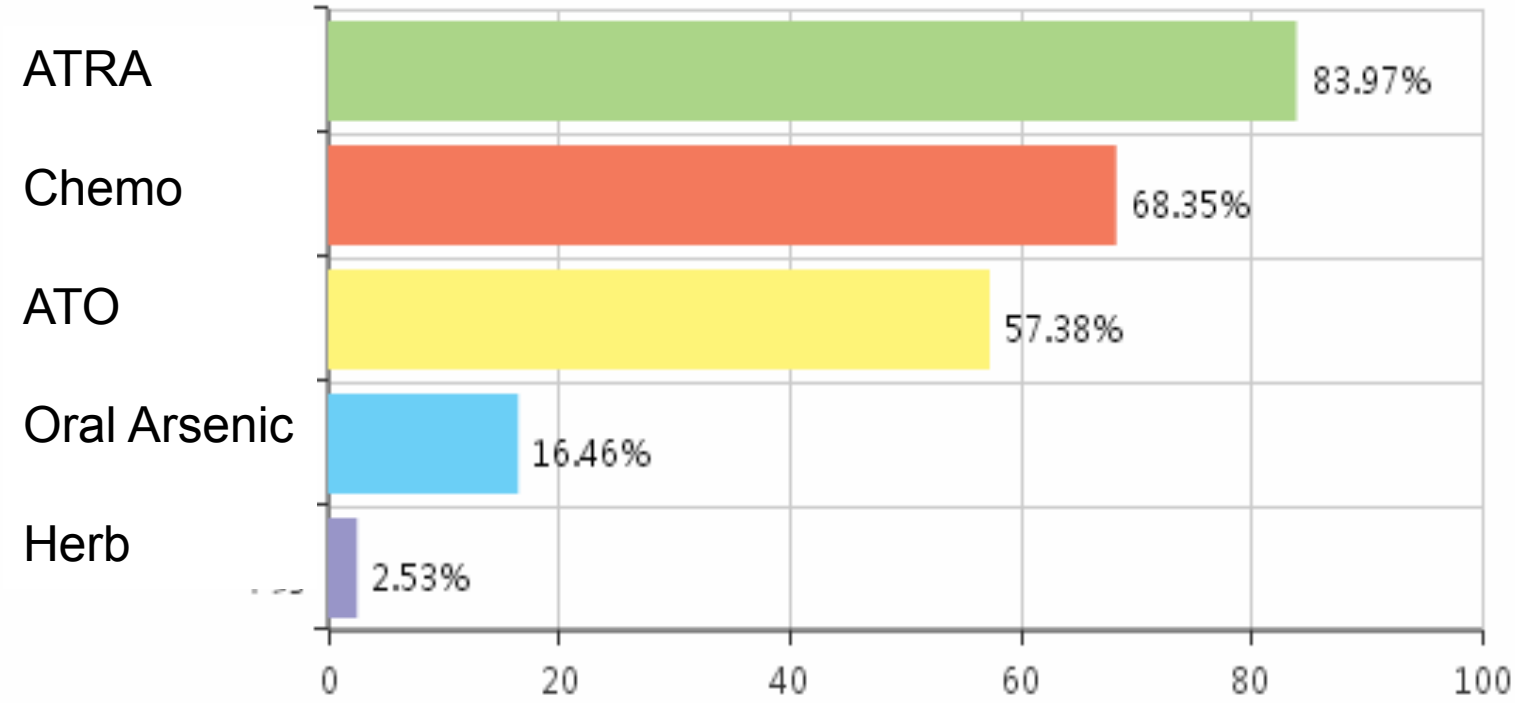
Do you think APL affects your life?



Where you get the information about treatment of APL?



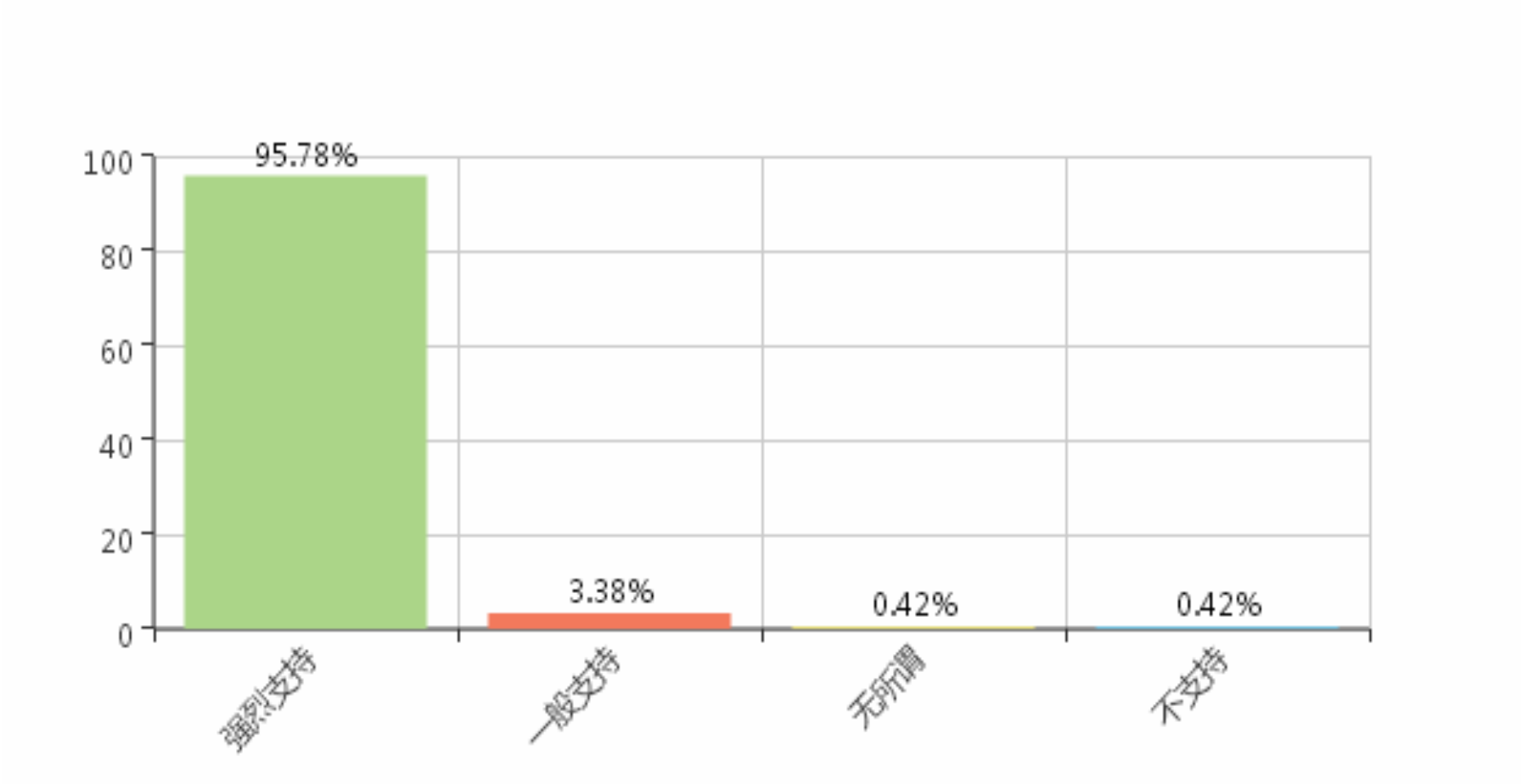
Which drug you used during induction



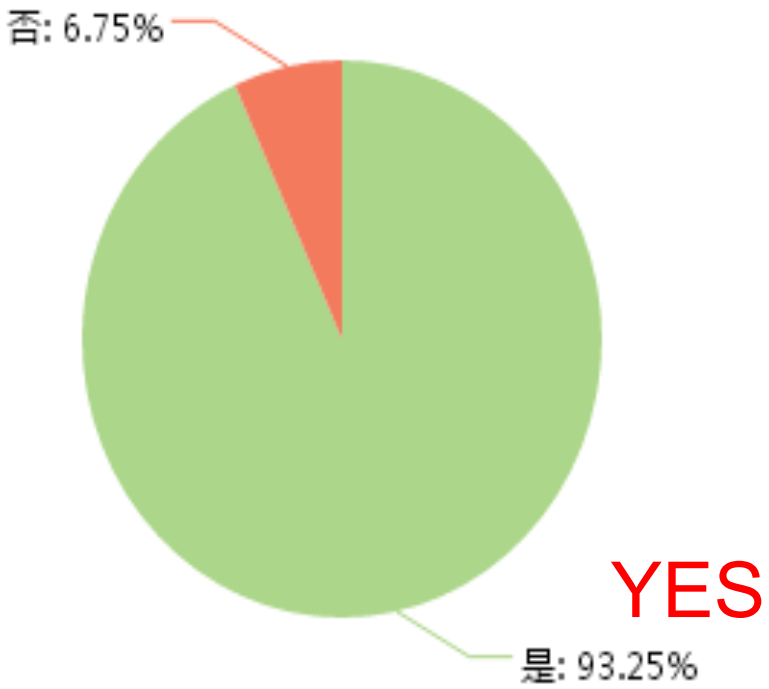
Arsenic use of the patients

- The percentage of respondents received arsenic during induction treatment was 73.8% (175/237), including arsenic trioxide (ATO) (n=136) and oral arsenic (n=39).
- However, the percentage increased up to 100% (237/237) during the post-remission treatment phase, including ATO (n=137) and oral arsenic (n=100).

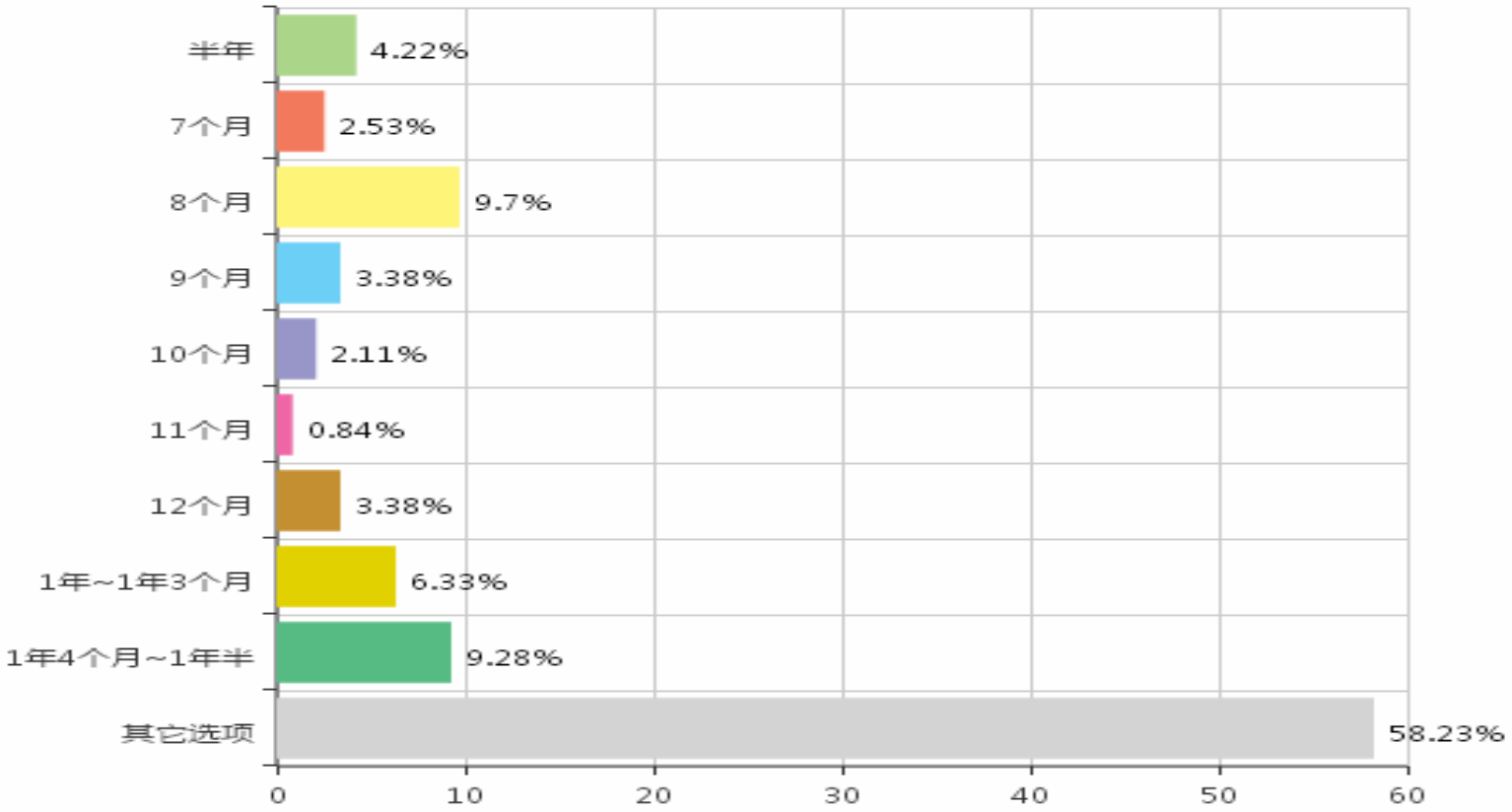
Do you want to receive oral arsenic-based treatment



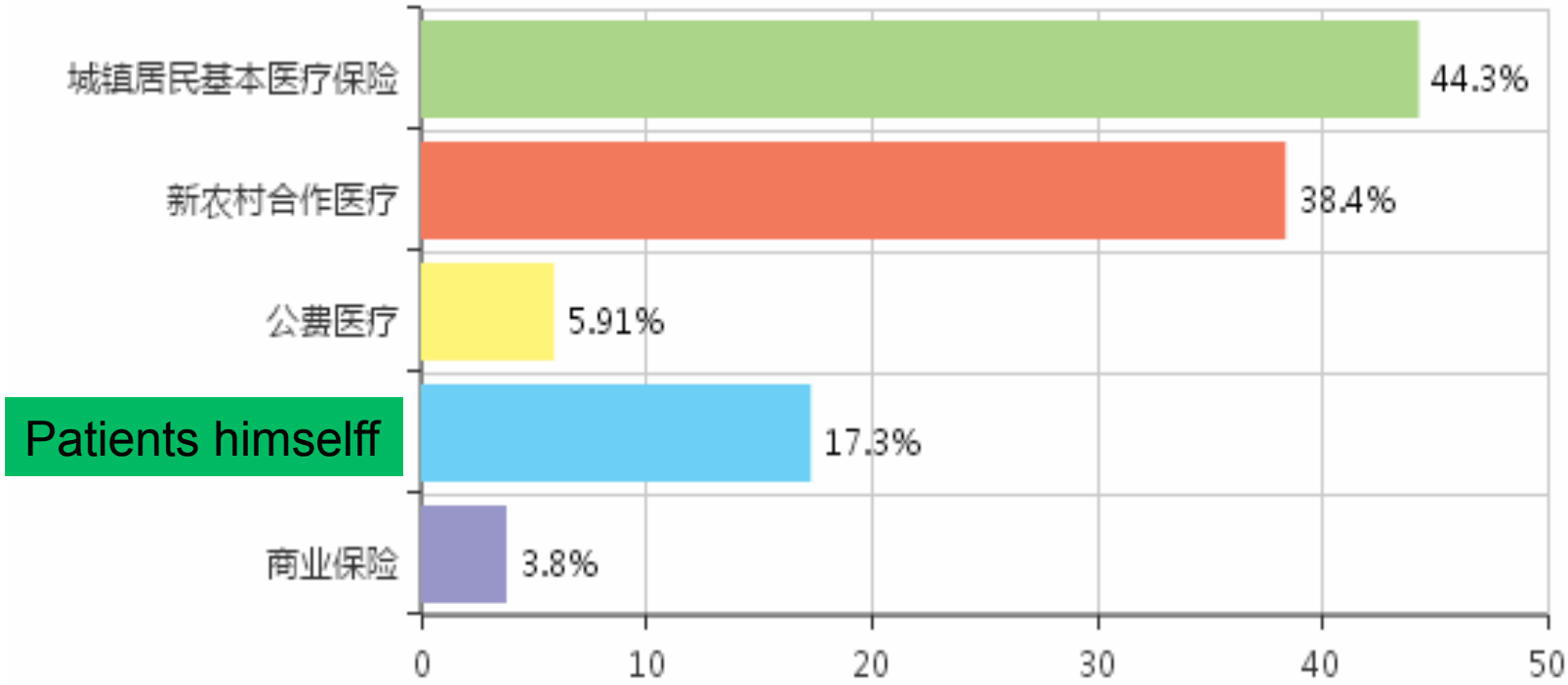
Do you want to try a completely oral , chemo-free treatment?



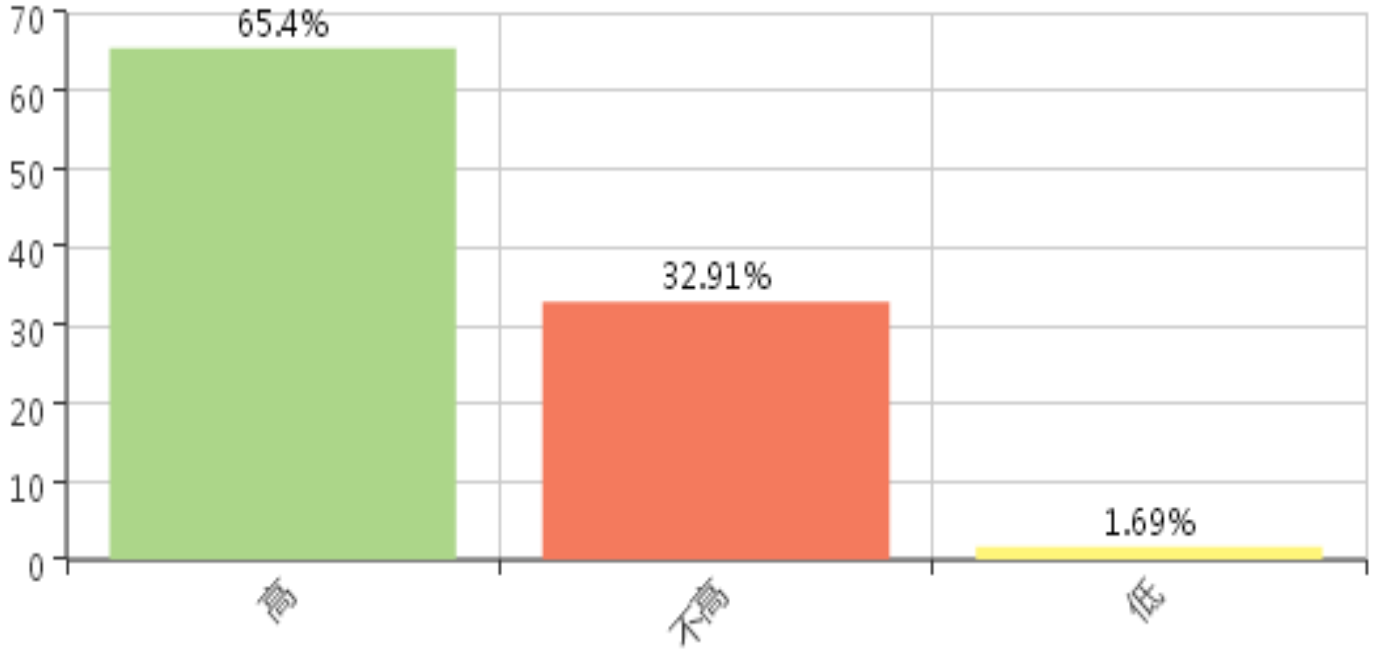
How long of your treatment phase?



Who afford the medical costs?

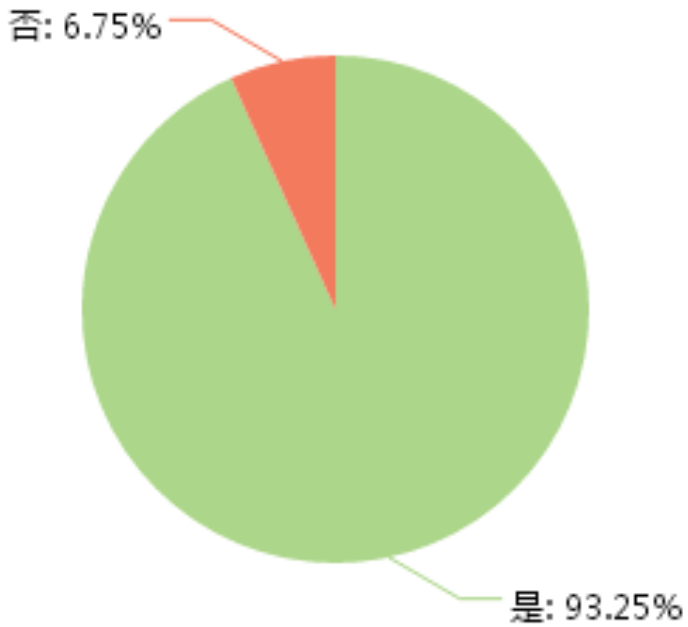


What you think about the cost of APL?

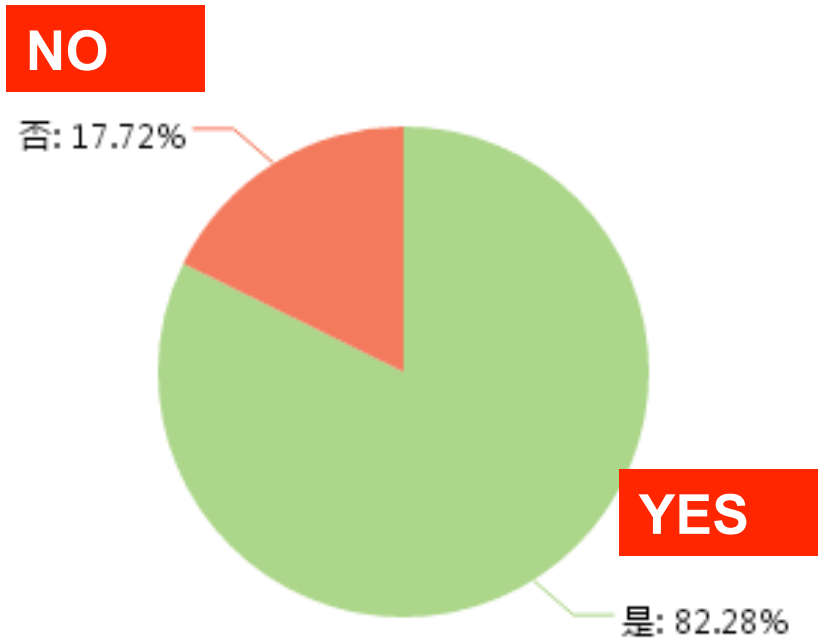


high intermediate low

Do you think it is necessary to monitor MRD?



Do you like to use blood rather than BM to detection MRD?



Conclusions

- More patients need to be treated accoring to the protocol recommended by guidelines
- Other efforts, such as health policy and education of patients is also important to get a high cure rate of APL patients

Thanks for your attention